

TOMORROW'S SILK ROAD

Assessing an EU-China Free Trade Agreement



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This book aims to provide an independent and in-depth contribution on the status of bilateral economic exchanges and persistent trade barriers between the European Union and China. A second objective is to encourage a frank and open dialogue, based on a scientific evaluation and without prejudice, of the possibility of a preferential trade agreement between the two sides.

The study was carried out by CEPS, in cooperation with the World Trade Institute at the University of Bern.

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LIST OF ABBREVIATIONS

ACP	Africa, the Caribbean and the Pacific
AD	Anti-Dumping
AML	Anti-Monopoly Law
APEC	Asia-Pacific Economic Cooperation
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China
ASA	Air Services Agreement
ASEAN	Association of Southeast Asian Nations
ASEM	Asia-Europe Meeting (of Prime Ministers and Presidents)
AVE	Ad Valorem Equivalent
BIT	Bilateral Investment Treaty
BRICS	Brazil, Russia, India, China and South Africa
BSE	Bovine Spongiform Encephalopathy (mad cow disease)
CAI	Comprehensive Agreement on Investment
CCC	China Compulsory Certification
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardisation
CES	Constant Elasticity of Substitution
CETA	Comprehensive Economic and Trade Agreement
CGE	Computable General Equilibrium
CIRC	China Insurance Regulatory Commission
CLP	Classification, Labelling and Packaging classification of chemicals
CNAS	China National Accreditation Service for Conformity Assessment
CNCA	China National Certification and Accreditation Commission
CSP	Corporate Social Responsibility
EDI	Electronic Data Interchange
EEA	European Economic Area
EFTA	European Free Trade Association
EPO	European Patent Office
ETS	Emissions Trading System
ETSI	European Telecommunications Standards Institute
FATS	Foreign Affiliates' Trade in Services
FDA	Food and Drug Administration (US)

FDI	Foreign Direct Investment
FIE	Foreign Invested Enterprise (in China)
FIPA	Foreign Investment Promotion and Protection Agreement
FTZ	Free Trade Zone
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GHS	Global Harmonised System
GI	Geographical Indication
GLP	Good Laboratory Practice
GMO	Genetically Modified Organisms
GOS	Technical standards/regulations in the USSR
GPA	Government Procurement Agreement
GTAP	Global Trade Analysis Project
GVC	Global Value Chain
HS	Harmonized System (of classification of tariff lines for goods)
ICT	Information and Communications Technology
IEC	International Electrotechnical Commission
IECEE-CB	System of Conformity Assessment Schemes for Electrotechnical Equipment and Components
IIASA	International Institute for Applied Systems Analysis
IMF	International Monetary Fund
IPPC	International Plant Protection Convention
IPR	Intellectual Property Rights
ISDS	Investor-State Dispute Settlement
ISO	International Organization for Standardization
ITA-2	Information Technology Agreement – 2
ITU	International Telecommunication Union
JV	Joint Venture
KORUS	United States-Korea Free Trade Agreement
M&A	Merger and Acquisition
MES	Market Economy Status
MFN	Most Favoured Nation
MOFCOM	Ministry of Commerce of the People’s Republic of China
MOH	Ministry of Health of China
MoU	Memorandum of Understanding
MPLS	Multi-Level Protection Scheme (China)
MRA	Mutual Recognition Agreement
MVNO	Mobile Virtual Network Operator

NAFTA	North American Free Trade Agreement
NAL	Network Access Licence
NDRC	National Development and Reform Commission
NRA	National Regulatory Authority
NTM	Non-Tariff Measure
OECD	Organization for Economic Cooperation and Development
OHS	Occupational (Workplace) Health and Safety
OIE	World Organisation for Animal Health
OSCCA	Office of the State Commercial Cryptography Administration of China
PAPs	Processed Agricultural Products
PCA	Partnership & Cooperation Agreement
PDO	Protected Designation of Origin
PGI	Protected Geographical Indication
PPP	Public-Private-Partnership
PRC	People's Republic of China
QUAD	US, EU, Canada and Japan (in the GATT)
RAPEX	Rapid Alert System (of non-food dangerous goods in the EU)
RASFF	Rapid Alert System for Food and Feed (in the EU)
RCA	Relative Comparative Advantage
RCEP	Regional Comprehensive Economic Partnership
REACH	European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
RMB	Renminbi
ROHS	Restriction of Hazardous Substances Directive
SAC	Standard Administration of China
SAIC	State Administration for Industry and Commerce
SASAC	State-owned Assets Supervision and Administration Commission (for SOEs)
SDFA	State Food and Drug Administration
SDoC	Supplier's Declaration of Conformity
SDR	Special Drawing Rights
SELO	Special Equipment Licensing Office for boiler pressure (China)
SIE	State Invested Enterprises (China)
SIPO	State Intellectual Property Office of China
SME	Small and Medium Enterprise
SOE	State-Owned Enterprise
SPS	Sanitary and Phytosanitary Measures
STRI	Service Trade Restrictions Index
TBT	Technical Barriers to Trade

TDIs	Trade Defence Instruments
TFEU	Treaty on the Functioning of the European Union
TIC	Testing, Inspection and Certification
TiSA	Trade in Services Agreement
TPR	Trade Policy Review (WTO)
TRIMs	Trade-Related Investment Measures
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TRQ	Tariff Rate Quota
TTIP	Transatlantic Trade and Investment Partnership
TTP	Trans-Pacific Partnership
UNCTAD	United Nations Conference on Trade and Development
USD	United States dollar
USTR	United States Trade Representative
VAT	Value-Added Tax
WIPO	World Intellectual Property Organization
WITS	World Integrated Trade Solution (World Bank)
WTO	World Trade Organization

PREFACE

The ancient Silk Road consisted of a network of paths, mountain passes and 'branches' used by daring traders to connect China and Europe via several intermediaries. There was no real infrastructure, just a near-endless chain of local and regional byways. Indeed, the Silk Road was not so much a 'road' but an expression of a fierce determination to connect markets and to seek the value-added of goods exchanged between different cultures and levels of development.

Tomorrow's Silk Road can add great value to what already is an intense economic intercourse between China and the EU. It is all about a similar determination as motivated the ancient traders. The present study shows that much could be achieved with 'Tomorrow's Silk Road', in the form of a Free Trade Area Agreement between the EU and China, especially if it is a 'deep and comprehensive' one. Good for China and good for the EU.

The authors would like to express their gratitude to many who have helped us with interviews, discussions, documents and otherwise. We wish to emphasise that the authors have been able to work in full independence at all stages of the work through to the very end when the results were available. In this respect, the Foreign Trade Association, having commissioned CEPS to carry out the original study, with the critical contribution of the World Trade Institute in Bern as well, has fully respected the independence of CEPS.

The authors are also grateful to the Chinese Mission to the EU, which has been very effective in supporting our visit to Beijing in December 2015, which proved most valuable. The same goes for the European Commission, which responded to our requests for specialised advice or comments on a number of occasions. Readers should be aware that neither the Chinese Mission nor the European Commission intervened at any moment while the authors were drafting this report. The study was first published by CEPS in 2016 as a CEPS paperback with a small print run. The present version has been partially revised and updated. Relatively minor adaptations of text and selected graphs were introduced in the first six chapters, and chapters 7 and 8 were revised in light of new trade defence rules in the EU. Other chapters with more substantial revisions include chapters 9, 10 and 11. Considerable changes and some additions have been made in chapters 12, 13, 14 and 15. Part III has not been altered.

We hope that readers will find this book valuable.

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EXECUTIVE SUMMARY

In developing its international trade strategy since 2006, the EU has placed a strong emphasis on concluding Free Trade Agreements (FTAs) with dynamic East Asian economies. Until very recently, however, no explicit mention has been made of China – the region’s largest and most dynamic economy – as a possible candidate for an FTA with the EU. This oversight becomes even more glaring if one considers the magnitude of the economic intercourse that already exists today between these two trading partners. China is the logical sequel in the Union’s trade strategy for East Asia. This study attempts to provide a solid analytical basis for negotiations on an EU-China Free Trade Agreement (formally, Free Trade Area treaty). The first official suggestion for such an FTA, made by Chinese President Xi Jin Ping in the spring of 2014, has recently been considered, cautiously and under various conditions, by the EU as well. This study deals with three principal aspects: 1) the ‘*why*’ of the FTA, 2) the ‘*how*’ to incorporate a broad spectrum of trade policy areas usually reserved found in ‘deep and comprehensive’ FTAs and 3) the stylised ‘*economic impact*’, based on a cutting-edge application of CGE modelling together with the newest GTAP database for such a demanding exercise.

The rationale for an EU-China FTA

The rationale behind an FTA between China and the EU – the ‘*why*’ – can be based on five arguments. More than one argument or all five of them might be valid for policy-makers at the same time. The keywords characterising these five arguments are: greater economic potential, comparative market access, mega-regionals, the link between Chinese reforms and exposure to foreign competition, and strategic and geo-political advantages.

EU-China: Economic and trade indicators, 2016

- GDP (current prices): \$16,268 billion for the EU and \$11,328 billion for China
- GDP per capita (current prices): \$31,873 for the EU and \$8,110 for China
- Total bilateral trade in goods and services: €580 billion
- FDI-EU position with China (2015): Outward €167 billion, Inward €35 billion
- Average applied tariffs in industry: 3.8% for the EU and 8% for China
- Average applied tariffs in agro-food: 7.2% for the EU and 13.9% for China

<i>Economic potential of an FTA</i>	The economic potential of EU-China trade and investment relations is far greater than what has proven possible until now (due to restrictions and bans), despite impressive growth of bilateral trade and investment in the recent past. The simulations in Part III of the study support the notion of much greater economic potential, insofar as such modelling can estimate such effects. The extensive qualitative evidence and business information in Part II of the study not only confirm this prognosis, but go far beyond what a quantitative simulation can calculate. For both the EU and China, tapping such economic potential is the principal mission of trade (and investment) policy; hence, this rationale is a powerful one.
<i>Comparable market access</i>	Another reason for the FTA may consist in the assurance of market access that is at least as good as is available with other relevant trading partners; otherwise, the competitive positions of EU and Chinese companies vis-à-vis companies from other trading partners may be damaged temporarily or permanently. This rationale is known as the ‘domino’ theory (or, alternatively, the ‘me-too’ rationale) for the incessant tendency to negotiate new FTAs. The EU and China each find that they are negotiating with trade partners having or planning to have an improved form of market access. This generates understandable pressures to improve market access also directly between themselves.
<i>Not losing out on mega-regionals</i>	A third argument for a EU-China FTA is the emergence of ‘mega-regionals’, including the Trans-Pacific Partnership (TPP) (without China), the Transatlantic Trade and Investment Partnership (TTIP) (under negotiation between the EU and the US), the Regional Comprehensive Economic Partnership (RCEP) (under negotiation, with China and the ASEAN countries as the main architects, but less ambitious) and, to a lesser degree, the EU-Japan FTA (agreed late in 2017) and the Comprehensive Economic and Trade Agreement (CETA) between the EU and Canada (under ratification, with provisional application in most areas). These pacts have increased the incentives for China to turn to its largest trade and major FDI partner – the European Union – to improve market access, deepen investment relations and intensify economic and technical cooperation.
<i>Domestic reforms in China facilitate an FTA</i>	A fourth case can be found in the strong link between profound domestic reforms in China, as the next stage in its transition to becoming a well-functioning, developed market economy and escaping the ‘middle-income trap’, and the exposure to foreign goods and services competition as well as more widespread FDI in all sectors. For China, it is the ‘new logic’. The fundamental connection is the drive to stimulate productivity growth over a long period, after the current model of mass production based on low-skilled assembly and extreme export-led growth in such products has begun to run out of steam. Higher productivity growth trends also require better, more and higher-quality services, both domestically and as crucial elements in global value chains. Opening up

	<p>the Chinese economy is therefore in the mutual interest of both the EU and China, and a deep partnership in the form of an ambitious FTA seems the most expeditious way to achieve that aim (compared to WTO pluri-laterals and still more technical cooperation, as alternatives).</p>
<p><i>Geo-political motivations</i></p>	<p>An EU-China FTA can also be considered for strategic and 'geo-political reasons', although it would seem ill-advised to engage in an FTA solely for such reasons. China might be disappointed in Asia-Pacific Economic Cooperation (APEC), as the group is now split for the time being between a TPP club of 11 and the other APEC members, most of which are in RCEP. China's cooperation with the BRICs is also not doing too well lately, and the Belt & Road Initiative and the Asian Infrastructure Investment Bank (AIIB) are in the early stages. China might eventually join TPP-11, but this is not certain at this time, as China has proposed an all-APEC FTA to APEC (which has not yet been taken up by other APEC countries). A China-US FTA seems hard to imagine politically (at least in the US). One might thus argue that the EU is an ideal geo-political partner for China, as the EU is a 'civil' Union and serves as its largest trading partner and leading investor (with an upcoming EU-China Comprehensive Agreement on Investment or CAI), without being a Pacific power in any other than a distant diplomatic fashion.</p> <p>Since President Trump has been in power, the US has given up any leadership in world trade, if not undermining the WTO in its refusal to act for the appointment of a judge in the Appellate Body. The case for joint EU-China leadership is strong given that they are the only two trade giants left, and given their strong positioning, e.g. in 2017 on deepening responsible globalisation. A FTA between the two can be construed as a powerful act of credibility in further opening up, which can be applied to trading partners as well.</p>

The economic and trade policy context

For a proper appreciation of a possible FTA between the EU and China, one has to understand the economic, trade and reform context in which such an initiative would be negotiated. Since the study focuses quite extensively on the wide scope and the 'how' of the FTA, the contextual analysis is necessarily a bit sketchy. The following aspects are briefly discussed: the overall trade and investment significance of the bilateral relationship today and in the near future, the link between the domestic reforms in China and the FTA initiative, the nature of recent FTA and investment treaties that China has concluded, some indicators of the bilateral trade and FDI relationship, and the importance of global value chains for trade with China and the EU jobs connected with it.

The significance of the bilateral trade and FDI relationship can hardly be underestimated. An FTA between the EU and China would be one between two trade giants. And the expectation is that China would assume the largest trade share in the world economy by 2030, distinctly ahead of the US and on par or slightly ahead of the

EU. No other BRIC will have reached anywhere near such trade shares, rendering an FTA even more crucial for both the EU and China.

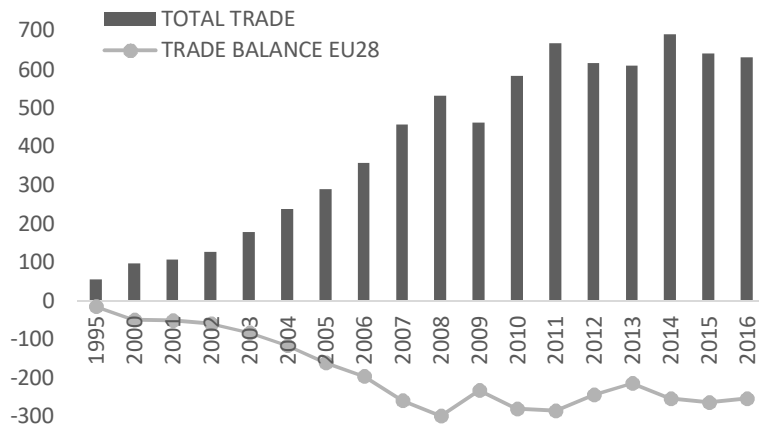
<p><i>Chinese reforms to foster trade and facilitate FDI</i></p>	<p>Since 2013, and indeed on a few subsequent occasions such as the 19th National Congress of the Communist Party of China, which took place in October 2017, the Chinese authorities have regularly announced the intensification of the country's reform process. The materialisation of these pledges, however, seems to be delayed and diluted in strength by half. If one would take these pronouncements literally, the difficult transition further away from the old planned economy to a market-driven one, with the state solely in a role as legislator, supervisor and enforcer, would signal decisive progress for China itself, but also for the EU and other trade partners. The new reforms aim to move away from mass production of scale-based and low-skilled labour-intensive goods (e.g. assembly) and to place greater emphasis on services to consumers (facilitating high-quality services to production processes in value chains) and less extreme emphasis on export-led growth at all costs and more domestic consumption by a rising middle class, supported – among other things – by more welfare state benefits, also for domestic migrant workers. These reforms are of course first of all good for China, but they also accord well with the opening up in services (now often restricted or banned for foreign providers) and investment, key offensive interests of the EU. In actual practice, reforms are always difficult to implement and China is no exception to this rule. Indeed, the resistance is likely to be deep, given the privileged status of SOEs (state-owned enterprises) and the overall protection of many services sectors. Also, China is more protectionist in FDI, despite the significant inflows and rising stocks, than any other relevant country, including other BRICS. Conscious of this all, top Chinese officials and ministers often suggest that external pressure would be helpful in accelerating domestic reforms. In an FTA, with the EU as a partner, it is possible that this may be realised in an acceptable fashion for both sides.</p>
<p><i>Chinese trade policy and FTAs</i></p>	<p>China's trade policies have been active on the bilateral front, much less with respect to WTO pluri-laterals and very little in the Doha Round. Its FTAs have typically been shallow (that is, focused mostly on tariffs, less or not at all on regulatory barriers). In terms of investment treaties, most of them are on narrow investment protection and not, or hardly, on effective market access (especially for services). But there are new signals, e.g. in its FTAs with Australia and Korea, which – in a staged approach – pretend to go into services and some regulatory issues in a WTO-plus fashion. As for investment, a treaty with Canada (Foreign Investment Promotion and Protection Agreement or FIPA) seems to show a new preparedness to become more ambitious, specifically with regard to the movement of natural persons, linked to business, such as allowing senior management positions no longer to be restricted by nationality (basically, like CETA and TPP). This is hopefully preparing the ground for the</p>

greater ambition required when the EU would negotiate an FTA with China, following the current investment (CAI) negotiations, or if a CAI would eventually be integrated into an ambitious FTA (as was done in CETA and in the EU-Vietnam FTA).

Bilateral trade and FDI

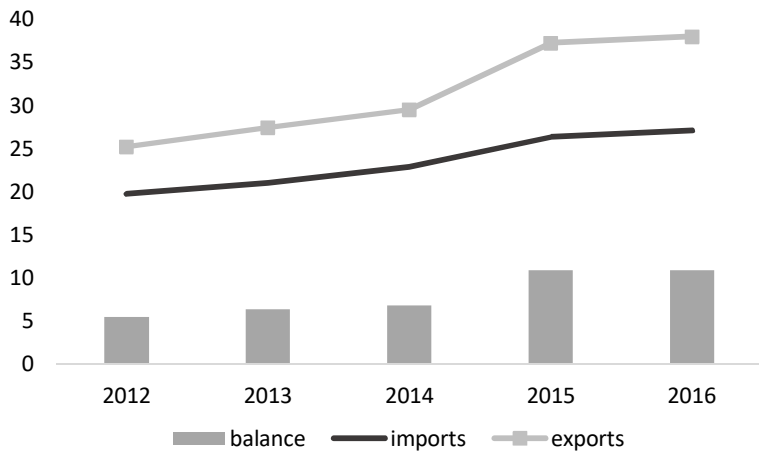
Bilateral trade and investment trends between China and the EU are indeed remarkable. The US dollar value of total bilateral goods trade since 1995 has increased by a factor of ten, reaching some €580 billion in 2016! Services trade (mode 1 of the General Agreement for Trade in Services or GATS) is strongly rising (to over €61.4 billion in 2016) over the past decade or so, despite restrictions in some sectors and the adverse effects of the crisis. The balance in goods trade leans heavily in China's favour, if only because barriers on the EU side are lower than the relevant ones in China for goods that EU companies specialise in. The trade balance in goods hovers around a \$200-plus billion (€175-plus billion) deficit for the EU since the crisis began but moving up recently (some €200-plus billion in 2016); in services, the EU has a surplus, which recently climbed rapidly to some €10.5 billion in 2016.

Figure ES1. Total trade EU28-China in goods (\$ billion), 1995-2016



Source: Authors' own calculations based on UNCTAD (2018).

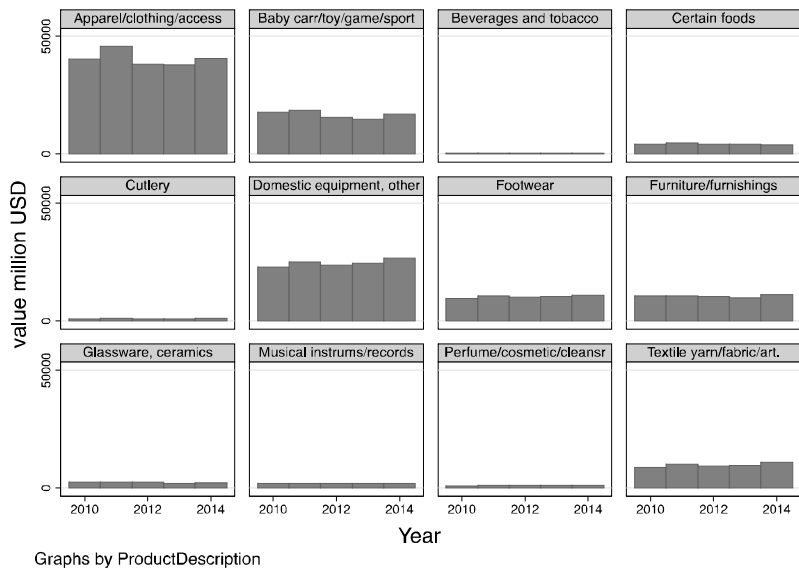
Figure ES2. Imports from and exports to China of services and EU trade balance, 2012-16 (€ billion)



Source: Authors' own calculations based on DG Trade (2018).

The EU's main imports from China consist of mass consumption goods (with sharp prices, helping EU consumers), but China has gradually accomplished a more balanced sectoral position. The EU exports, particularly machinery and transport equipment (no less than \$126 billion in 2014) and chemicals, but increasingly (albeit from a low base) also agro-food products.

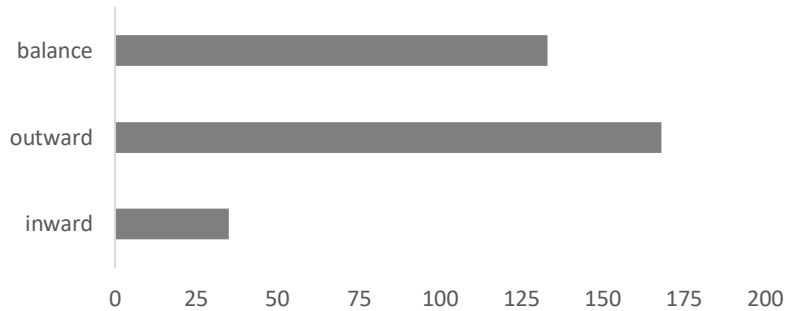
Figure ES3. EU 2014 imports of mass consumer goods from China, 2010-14



Source: Authors' own calculations based on World Integrated Trade Solution (WITS) (UNCTAD) trade data, mapped to ISIC3 categories.

The EU's 2015 FDI stock in China is around €167 billion, with China's FDI stock in the EU steadily growing to some €35 billion. Altogether, trade and investment interdependence between China and the EU has become of major importance.

Figure ES4. EU FDI stocks towards China (€ billion), 2015



Source: Authors' own elaboration using DG Trade (2018).

Dependence on bilateral trade

The 'relative trade dependence' of the partners has been rising, but it is a little asymmetric. The Chinese goods market as a share of all EU (external) exports of goods rose from a little over 2% in 1995 to more than 8% in 2016, a strong growth but from a low base. China relies relatively more on goods exports to the EU starting with a share of 13% in 1995, moving up to 15% for over a decade, and falling to 12.5% in 2016. On the import side, EU imports from China have become relatively much more important, rising from 3.5% of all EU imports in 1995 to no less than 20% in 2016. For China, imports from the EU have, relatively, been on the decline from no less than 16% in 1995 to 12.5% in 2016, presumably due to the strong rise of intermediate input imports of China in the East Asia region.

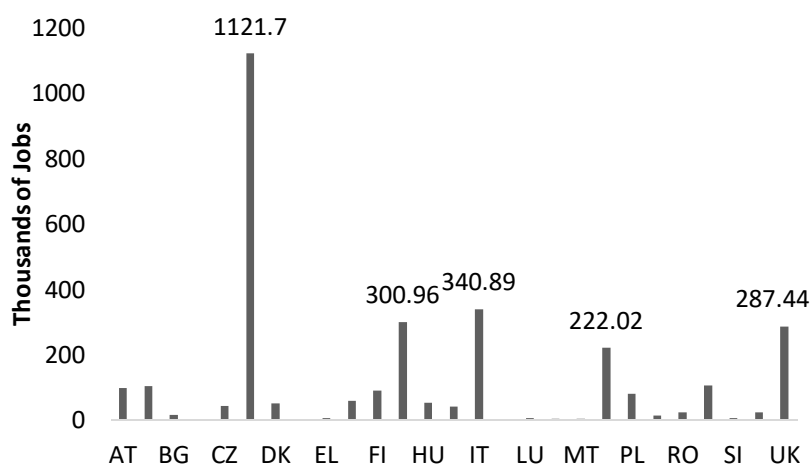
China and global value chains

Understanding the functioning of global value chains, a specialised subject in its own right, is critical to appreciate future trade trends between the two economies and the possible role of European business in China-EU trade and FDI. Suffice it to note that EU companies have many links with China via the now traditional export processing zones (where many value chains 'end') but also more and more with establishments in China itself, both as a supplier of intermediate goods (both inside multinationals and between otherwise independent enterprises) and indeed as a producer of final goods for China and abroad, including Europe itself. However, one should not exaggerate the extent to which trade with China arises from global value chains. Importers, retailers and wholesalers alike, for example, rely on China for sourcing, leading to major trade flows irrespective of diversified value chains. The study presents trade statistics in value-added terms in which imported inputs (into China) are deducted from China's exports, with the result that what remains is genuine value-added in China [made 'by' China]. The upshot is that the EU's trade deficit with China is lower, by removing the double-counting.

Jobs and the Chinese connection

Value-added statistics also facilitate the linking of EU jobs directly with the value-added of exports to China, and even the jobs linked to imports from China. The study shows that five EU countries have prominent job figures connected with EU-China trade (in goods), with Germany having as many jobs linked to its exports to China [1.122 million] as the four EU countries next on the list [France, Italy, the Netherlands and the UK] together. However, imports from China also provide lots of jobs in various ways: some 1.1 million jobs. These imports may consist of intermediate goods but also, and for large import values, of so-called mass consumption goods, creating numerous jobs in the distribution sector. In China, imports from the EU have created some 5.5 million jobs! These figures show that bilateral EU-China trade is of great mutual benefit. In Figure ES5, services are included insofar as services have been incorporated in goods exported.

Figure ES5. Number of EU jobs supported by member states' exports to China, 2011



Source: Authors' own elaboration using DG Trade, Joint Research Centre Trade and Jobs (2015).

Design and substance of an EU-China FTA

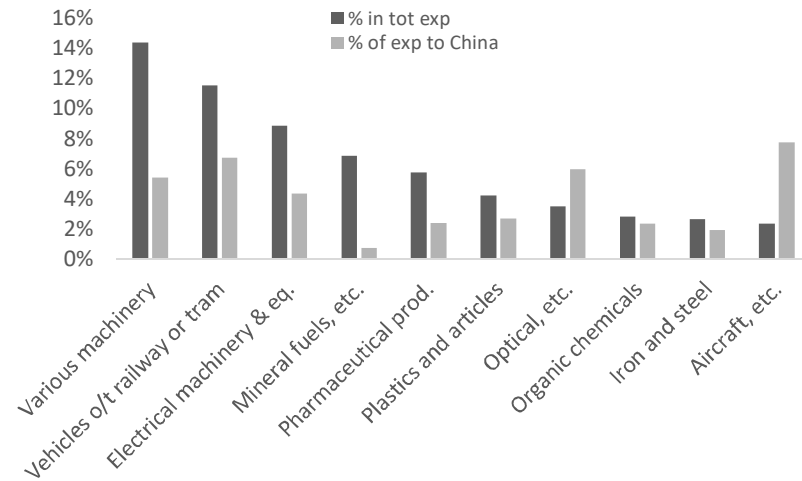
After first discussing the appropriate design of an FTA between the EU and China, the substance of a 'deep and comprehensive FTA' is elaborated in nine chapters, besides a brief excursion to trade defence instruments (TDIs), such as anti-dumping (which are not a genuine FTA topic). The nine building blocks of such an FTA are: 1) bilateral tariff removal in industrial goods; 2) removal of tariffs and enlarging tariff-rate quotas (bilaterally) for agro-foods; 3) reducing technical barriers to trade; 4) reducing sanitary and phytosanitary (SPS) barriers in agro-foods, 5) free or improved market access in services, 6) (non-discriminatory) access to public procurement, 7) TRIPs-plus regulation and enforcement of IPRs (intellectual property rights) and generous recognition of geographic indications (GIs), 8) market conformity of state-owned enterprises (SOEs)

and other competition issues, and finally 9) investment (both protection for investors and market access). Unfortunately, given the limited time and resources, no chapter on sustainable development could be included.

<p><i>What kind of FTA: Shallow, or deep and comprehensive?</i></p>	<p>The design of FTAs is based on a preliminary choice: to make either a 'deep and comprehensive' FTA or a 'shallow' one. This black-and-white contrast is perhaps less relevant in today's world economy, but it is helpful to clearly identify the choices to be made. A 'deep and comprehensive' FTA is very <i>wide in scope</i> of trade and investment areas, covering all relevant areas of a regulatory nature that can unnecessarily raise the cost of market access. It is also '<i>deep</i>', that is, with firm legal commitments and enforcement options that are credible to market players, as well as with joint monitoring, options for appeal and possibly even a 'living agreement' allowing a further 'deepening' of commitments over time. A 'shallow' FTA focuses mainly on tariffs and (say) origin rules, possibly services (but barely or not beyond GATS commitments of partners) and sometimes other chapters of a regulatory nature but solely with 'best endeavours' and mere cooperative intentions beyond the regulatory statutes of the WTO, e.g. the technical barriers to trade (TBT) and sanitary and phytosanitary (SPS) agreements.</p>
<p><i>Why a deep FTA is good</i></p>	<p>China and the EU will first have to agree on this fundamental design issue, prior to a possible scoping exercise as the basis for trade negotiations. For China, this will present quite a challenge. Although it has begun experimenting with slightly deeper FTAs – but only in a staged approach – they are far removed, as yet, from the typical design that the EU will have in mind. On the other hand, it is surely in China's interest. Precisely a 'deep and comprehensive' FTA is an ideal mechanism allowing China to expose some of its goods and many services sectors to competition, as well as to support better regulatory practices in several domains. This would be a perfect fit for its domestic reforms and would undoubtedly encourage them. The argument that an ambitious FTA would be 'unbalanced' (for China) has to be assessed with care. One might just as well hold that a shallow FTA is unbalanced for the EU given its comparative advantages.</p> <p>But there is also the economic argument that an ambitious FTA is more effective. Recent empirical economic research has demonstrated, more rigorously than before, that 'deep' FTAs generate far more additional trade than do shallow ones.</p>
<p><i>What goods dominate in bilateral trade?</i></p>	<p>EU-China goods trade is huge (together some €580 billion, including some € 16-plus billion in agro-food in 2016). The top-three industrial sectors exporting to China are 'various machinery' (22.5%), automotive (22.5%) and electrical machinery. EU imports from China are highly concentrated with nearly half in electrical machinery and various machinery. As far as consumer goods are concerned, Figure ES3 shows</p>

that imports of apparel/clothing, baby articles and toys, sporting goods, domestic equipment, footwear, furnishings and textile fabrics are important.

Figure ES6. Top 10 European exports to the world (shares in total exports and shares directed to China, 2014)



Source: Authors' own calculations using World Integrated Trade Solution (WITS) data.

Is China moving up the ladder?

One begins to discern patterns of intra-industry trade between the European Union and China, at least at the (high) two-digit level of sectors. This is measured with so-called Grubel & Lloyd indices [from 0 to 1, the latter showing that intra-sectoral two-way trade is at the maximum]. The relevance of these indices is that they are a first indicator that China is moving up the ladder of comparative advantages, away from mere assembly. The study uses broad (two-digit) sectors for these indices – to verify this in more detail would require elaborate analysis at the 4-, 6- and 8-digit level of sectoral activities. In 2014, three sectors have indices above 0.3: optical instruments (etc.) of 0.9 (which is extremely high), for various machinery (0.64) and electrical machinery (0.35); automotive remains just below with 0.28. Interestingly, this intense intra-sectoral trade takes place despite considerable tariff barriers in these areas.

Other signs of moving up

Another way to underpin empirically that China is broadening its sectoral industrial export base and moving 'up market' is the revealed comparative advantage (RCA) index. With sectoral RCAs above 1, one can trace (relative) sectoral exports better than the world average. The study finds that i) not only traditional low-skill intensive sectors have Chinese RCAs (far) above 1, such as clothing, footwear and intermediates made from hides and skin, but also machinery and electrical equipment (a very large trade category, in which EU industries are world leaders,

	<p>except for electronic mass-produced goods like computers, etc.); and ii) the RCAs of other industries are increasing recently, such as chemicals, plastic/rubber products, ceramic goods and metals (although transport equipment is decreasing).</p>
<p><i>Tariff peaks are the real hurdles</i></p>	<p>Industrial (applied) average tariffs are a little below 4% for the EU and 8% for China. Although double the EU average, the Chinese applied tariff average is not a major problem as such. The real problem with Chinese tariff protection arises from the (applied) tariff <i>peaks</i>, with over 1,400 8-digit peak tariffs as against 45 for the EU [a peak tariff is defined by the WTO as higher than 15%]. With no less than 940 of these in specific clothing items – no longer a significant export item for the EU – the focus should be on comparative advantage sectors of the EU, such as various machinery (66 Chinese applied peaks), electrical machinery (93 peaks) and automotive (171 peaks). China faces 26 EU tariff peaks in footwear and another 19 in automotive and other transport equipment. If one considers the spread of these Chinese peaks in tariff ranges above the 15%, in various machinery, electrical machinery and automotive, the peaks are often 20% or higher still, with quite a few tariff peaks in the 25-35% range, or 35-45% range and a few even higher than 45% (example HS 8711, motorcycles). The EU simply does not have such tariff peaks outside agro-food.</p>
<p><i>A word on trade defence instruments</i></p>	<p>Some border duties are a result of the application of so-called 'trade defence instruments' (TDIs), the most important one being anti-dumping duties. Such TDIs are highly country-, product- and firm-specific. Both China and the EU have been active on the TDI front for many years, but the EU has targeted China much more than China the EU. The share of China being targeted in anti-dumping cases (as a % of all cases by the EU) has gradually grown since 2001 (when China became a WTO member). In 2014, no less than 47% of all EU anti-dumping measures in force were against a Chinese enterprise (sometimes with firms from other countries), rising to 68% by November 2017! For China (in 2015), measures in force against EU companies amounted to only 17% of cases. Still, TDIs are not normally part of FTA negotiations. In 2016, the debate on TDIs with respect to China was dominated by the so-called MES (market-economy status in anti-dumping) question: should China no longer be treated as a non-market economy in anti-dumping procedures but rather as a country (economy) like all others, that is, accepting internal Chinese market prices as driven by market processes? Again, this is not an FTA question at all. The present study incorporates a short review but only in an informative sense. Why? Because the present climate, dominated by MES debates, is less than ideal for initiating exploratory talks on a possible FTA and this has to be realised. On the other hand, the extreme overcapacities in steel, aluminium and ceramics that China has allowed to develop artificially and for so long, have such important negative international spill-over effects (also, but not only, in the EU), that, MES or not, it is in the interest of all major trading partners</p>

	<p>- first of all, China itself - to address them firmly without delay, no matter how painful.</p> <p>In December 2017, the EU enacted new anti-dumping and countervailing duties regulations, not based on China being a non-market-economy. Thus, de facto the EU has accepted the WTO obligation to accord MES to China, the deadline for which was December 2016. The new EU rules distinguish WTO signatories (including, of course, China) and non-WTO countries (such as Tajikistan). For the former category, the regulation imposes special procedures in case of 'significant distortions' in the economy, making domestic price formation unreliable as a guide for TDI. Chapter 7 provides a brief overview of the rules and complications this gives rise to. A very detailed country report trying to identify 'significant distortions' has already been published by the Commission: it deals with China.</p>
<i>Market access in agro-food</i>	<p>Market access in agriculture has traditionally been more difficult for very many WTO members almost everywhere across the globe. At first, China went even further. For centuries, the country has pursued self-sufficiency in agro-food, but gradually, it is changing its position, in part, because greater prosperity has generated more sophisticated demand than is less easily satisfied locally, and, in part, because food quality and safety are not fully trusted by Chinese consumers. The two traditional instruments of trade protection in agro-food are tariffs and TRQs (tariff rate quotas). Weighted MFN-applied tariffs in agro-food are 12.3% for China and 6.9% for the EU. EU and China's bilateral agro-food exports were more or less balanced until around 2008, when trend growth of EU bilateral exports went up (leading to a growing surplus up to 2016). The principal EU exports are beverages, meat and cereals, whereas China exports fish, products of animal origin and edible vegetables. However, many subsectors for both Parties participate in bilateral agro-food trade.</p>
<i>More on agro-food tariffs</i>	<p>Tariffs for agro-food can be high. For the EU this is the case for dairy products (8.1%), processed agricultural products (PAPs; 14%), sugar and confectionary (11.4%) and beverages & tobacco (23.1%). For China these two-digit tariff averages are always higher, not least in sectors of EU export strength, such as beverages (26%), sugar & confectionary (25%), PAPs (17%), cereals (etc.) (18%) and dairy products (13%). Also, for various animal products, where EU tariffs are low, Chinese tariff averages hover around 11%-12%.</p>
<i>Tariffs peaks in agro-food</i>	<p>Tariff peaks are relatively numerous. The EU and China exhibit some striking differences. Whereas the EU's protection is very targeted, with 144 (applied) tariff peaks at the 8-digit level in fish, 21 in fruit, 120 in prepared meat or fish and no less than 431 for prepared fruits & vegetables (with other subsectors having virtually no peaks at all), China has spread applied tariff peaks over practically all agro-food sectors. Two conspicuous subsectors are prepared fruit & vegetables with 104 peaks</p>

	<p>and fruit with 52. Going to the 6-digit level, one observes that the EU has 60% of its tariff peaks in the 15-20% range (China only 17%), implying that Chinese peaks are very often higher than EU peaks, if and when they are in the same subsector.</p>
<p><i>Why tariff-rate quotas matter but less</i></p>	<p>TRQs are also quite different between China and the EU. A TRQ maintains a low or zero tariff for a certain volume of imports [the quota], and a high (or prohibitive) tariff for beyond-quota imports. On the one hand, the EU is far more protectionist than China in this respect: the EU maintains 269 8-digit TRQs as against China, with 47. Second, whereas the EU regime is very complicated (and partly seasonal as well), China's TRQ regime is simple. But for the FTA, the good news is that only three subsectors overlap in terms of TRQs: cereals, milling products and sugar (etc.). This implies that one another's bilateral exports are not or hardly hit by TRQs. For example, Chinese TRQs for wheat, cotton, rice and wool account for most of the TRQs, and these are not offensive interests for the EU.</p>
<p><i>TBTs can severely hinder effective market access</i></p>	<p>Technical barriers to trade are an important issue in EU-China goods trade. Both Parties are WTO members and hence subscribe to the WTO TBT Agreement. This includes a notification system to the WTO TBT Committee. The rates of notification (quite high for China, a little less high for the EU) are not a good indicator for the frequency and/or costs of TBTs. The so-called 'specific trade concerns' are about notifications that raise TBT concerns with other WTO members. The EU has introduced 40 such concerns with respect to China (quite high for the WTO) and China has raised 26 such concerns with respect to the EU. The costs of TBTs have to be added to other market-access costs for industrial exporters. There are (rough econometric) estimates in the economic literature of such TBT costs (or, more precisely, any extra costs on top of tariffs, so this may include SPS measures or others), but these estimates are to be taken with several grains of salt. Nonetheless, what <i>is</i> clear is that these extra costs for market access are much higher than average tariffs, and hence, they often add significantly to the costs of market access. In subsectors with a higher (say, a peak) tariff <i>and</i> TBTs, it might mean that effective market access is not feasible.</p>
<p><i>Systemic TBT issues in China</i></p>	<p>Chinese TBTs and EU TBTs appear to be not very different when looked at on a case-by-case basis, in their technical details, but there are differences in the two TBT regimes. By far the most important difference is <i>systemic</i>: the overall Chinese regime (governance) of technical regulations, standards and conformity assessment has emerged from a planned, top-down regulated economy, at first in relative isolation. The planned economy and the isolation are no longer true, but their legacies are everywhere and shape many decisions and non-decisions. There is even a fundamental problem of terminology (e.g. what a 'technical standard' really is), which is not in line with the TBT Agreement and its annex, applied by standardisation bodies worldwide. China – as part of</p>

	<p>this legacy – does not have standardisation bodies like most other WTO members have. These are private bodies creating market-driven standards, which – at times – can also be employed for regulation. Until 2015, standardisation was heavily done by ministries.</p> <p>Even what are called enterprise standards must be registered. The state influence is basically omnipresent, precisely because business standards bodies with open-inquiry procedures are absent. There is also fragmentation of the Chinese [not-so] single market as well as a legacy of far too many institutions, ministries, agencies and others having some ill-defined regulatory or standardisation competence (which they are loathe to give up), with uncertainty and unproductive overlap as a result. The Chinese leadership has therefore decided to start a genuine overhaul of the system, begun in 2015. This study makes an attempt to appreciate the nature and consequences of this systemic reform. However, the reform plans do not include the creation, in the market, of private, independent standards bodies like CEN/CENELEC or more or less similar US bodies. In October 2017, China enacted a first-ever Standardisation law, which is summarised in chapter 9. It reduces confusion over terminology, streamlines the overall institutional regime and allows somewhat greater bottom-up influence and consultation. However, the influence if not dominance of state bodies and (in)direct control has remained. The law confirms that China intends to participate far more actively in world standardisation, which is a welcome development.</p>
<p><i>TBT details and examples</i></p>	<p>Helped by systematic, annual reporting by EU businesses in China, this study attempts to illustrate many examples of TBTs, including problems of conformity assessment. On the Chinese side, no such reporting is known to exist, but WTO reporting does provide some insights into the character and magnitude of the barriers Chinese exporters face in the EU. China does not have a RAPEX (Rapid Exchange) alert system for dangerous non-food goods for consumers or workers. The EU system has functioned for one and a half decades now and China is by far the largest culprit in these reports. For consumers, in 2014, notifications of such dangerous goods coming from China were far ahead of any other country [1,462 as compared to the second country, Turkey with 66 and the US with 60], and this has been a trend for the past decade. The EU and China have set up several technical cooperation programmes to address these problems. For workers, there were (in 2014) 37 notifications for China as against 25 for all other countries together.</p>
<p><i>Systemic SPS issues in China</i></p>	<p>SPS measures on food, feed and plant health, although different from TBTs in some respects, show similarities with the systemic issues in TBTs. It is clear that China struggles with (technical) capacity questions, and the EU has set up an extensive capacity-building programme with China in an attempt to bring the technical backing of authorities in SPS issues up to standard throughout this large country. In an unusually frank style, the WTO has criticised China's approach to SPS issues thus far, focusing</p>

	<p>again on systemic questions. The thrust is that there are too many state organs at several levels of government and too many laws and regulations, without much transparency or discipline (e.g. long and indefinite waiting times). An unusual number of products are subject to possible SPS measures (indeed, some 2,032 tariff lines at the 8-digit level).</p>
<p><i>SPS details and examples</i></p>	<p>Again, WTO notifications are not a good indicator of SPS barriers; rather, they serve as an open invitation to other WTO members to be available for consultation, should this be seen as necessary. Nevertheless, China is an active notifier (but so is the US). It is striking that China seems incapable of solving outstanding trade irritants in SPS in a speedy manner: both the US and the EU have old trade concerns that have still not been addressed effectively. The top three concerns in more general terms with respect to China are: i) insufficient respect for international 'standards' from international organisations of which China is a member (e.g. Codex Alimentarius, the OIE for animal health and IPPC for plant health); ii) very lengthy, complex and non-transparent application procedures; and iii) 'embedded discrimination' in several ways. For the EU, this latter is manifested principally in China's lack of recognition that, in SPS issues, overwhelmingly, the EU is a single market with fully harmonised rules and inspection (nonetheless, China goes member state by member state, without any serious justification). The study lists specific EU and Chinese trade concerns in SPS matters. For the EU exporters, procedures can be extremely costly (a detailed example on accessing the meat market in China, after basic approval has already been granted, is provided in the full study).</p>
<p><i>Export potential in agro-food to be tapped</i></p>	<p>It is clear that the tough transition from the old planned economy, together with China's extremely rapid growth (which has catapulted the country in a short period to expectations of world levels of compliance), are the main reasons for these problems. It is important to urgently address SPS barriers because the incipient Chinese demand for EU agro-food products is very high, despite the extra SPS costs and often-high tariffs. The potential is only beginning to be tapped.</p>
<p><i>Services trade restricted, mostly by China</i></p>	<p>EU-China cross-border services trade is still underdeveloped. Moreover, mode 3 of the General Agreement for Trade in Services (GATS) – essentially FDI with a view to supply services locally – is also severely restricted (see further). The EU's barriers to cross-border services trade are usually lower (or absent), but formally the EU maintains some barriers legally as a form of reciprocity. These EU barriers could easily be lifted in an FTA. There are two STRI (Services Trade Restrictiveness Index or STRI) indicators to measure the restrictiveness of services regulation in OECD/G-20 countries. The study shows that i) the regulatory restrictiveness of Chinese services markets is much greater than that of the EU and ii) some services markets in China are de facto closed for investors but also for cross-border trade. However, and despite an enormous database underlying them, these STRI indicators (from the</p>

	<p>World Bank and the OECD) have serious imperfections, such that, for transport and telecoms, they contradict each other in the case of China and the EU. Therefore, one should be cautious in relying on them too much.</p>
<p><i>What lies behind China's restrictiveness in services?</i></p>	<p>The study attempts to comprehend the serious transition problem China also faces in the case of services. It is far behind in services as a share of GDP, even compared to other BRICs, presumably due to its emergence from a planned economy (where services 'did not matter') as well as to the emphasis on export-led growth via assembly and (at first) little else. A cardinal problem for China is that, in order to make such a transition effectively, as one remembers from the experience in Eastern Europe, a hard, credible and consistent regime should reside at the basis of such deep reforms. It is nearly impossible to create such an 'economic constitution' from within, to serve as a proper, pro-competitive regulatory 'anchor' in the rough waters of transition. At the time of the East European transition, this 'anchor' was the EU and it was fully accepted as authoritative due to 'pre-accession' and future EU membership. In China, effective transformation has to be based on internal political forces, lingering (but 'former') institutions and legacies. Amongst these legacies are the SOEs, which are very prominent in services markets, via regulations (and bans for others) and extreme market power and enjoy privileged access to finance and top political support (directly from the Party).</p>
<p><i>Details on services restrictions, also in China's recent FTAs</i></p>	<p>This study also goes into practical details. It comprises a list of regulatory and related aspects of services in China, with attention paid to the original GATS commitments of China, market access issues, national treatment, SOE presence and miscellaneous aspects. This survey covers 14 broad services sectors, including air transport in which the EU as a whole has concluded an Air Services Agreement with China in 2017. A table surveying possible access barriers for Chinese companies to the EU (in seven sectors) based on WTO information is included as well. In order to gauge the prospects for a 'deep and comprehensive' FTA with China in this area, an attempt is made to compare two recent FTAs which seem relevant as a comparison: the China-Korea FTA of 2015 and the EU-Vietnam (also emerging from a planned economy) FTA of 2015. The comparison deals with eight aspects including e.g. whether or not it is combined with investment, what services sectors are in, national treatment and MFN as well as competitive safeguards.</p> <p>One inference is that China is beginning to shift to slightly more ambitious FTAs, but cautiously as well as in stages. The China-Korea FTA does not incorporate a SOE chapter, but the EU-Vietnam agreement does, although not (yet) as ambitious as, for example TPP has, even though Vietnam is also a TPP signatory. An FTA between the EU and China cannot possibly be imagined without an ambitious services chapter (and – not to forget – in combination with drastic mode 3 (FDI)</p>

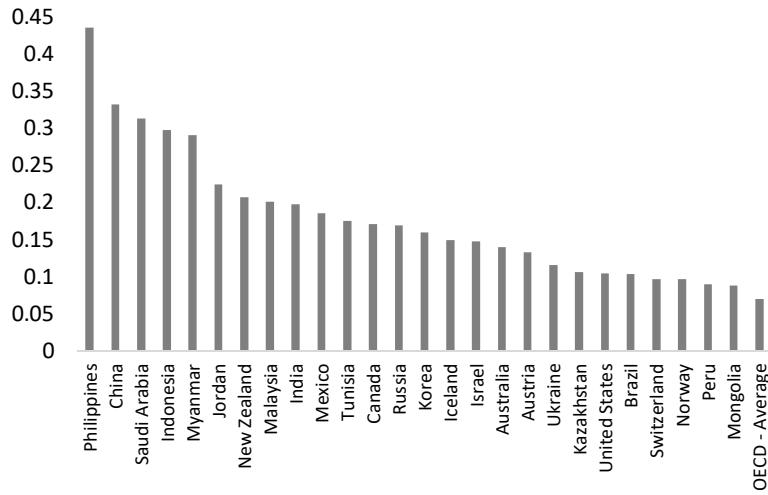
	<p>liberalisation, discussed below). At the same time, Chinese reforms would not be serious if far-reaching opening-up of services would not be accomplished. China can catch two birds with a single stone: bilateral (and perhaps also plurilateral) liberalisation of access to services markets in an FTA with the EU.</p>
<p><i>Public procurement: no level-playing field whatsoever</i></p>	<p>The EU and China have very divergent regimes for public procurement. The EU adheres to the plurilateral WTO Government Procurement Agreement (GPA). In accordance with its WTO Accession Protocol, China started negotiations to accede to the GPA in 2007. After six offers from China, the negotiations are still ongoing. Essentially, China is closed for foreign competitors bidding for public procurement contracts, except in cases of shortages of technology or otherwise. Chinese companies have a much easier time in the EU and manage to obtain contracts in the public procurement market for substantial amounts. For example, in 2013, Chinese companies acquired €5.25 billion worth of contracts for work in the EU; while the business turnover of completed works reached €4.01 billion. China has so far concluded 15 FTAs, but none of them incorporates public procurement. Market access for public procurement is not found in any other bilateral, regional or multilateral agreement it has signed.</p> <p>Although access to EU procurement markets is relatively unproblematic, Chinese businesses complain that the EU public procurement market suffers from persistent fragmentation, which brings about unpredictability, increased business costs and risks. Still, EU companies in China are not granted the reciprocal treatment that they understandably wish to enjoy. They face 'buy-China' policies in China and are confronted with unpredictability, especially regarding 'offset' requirements such as local content and technology transfer. These are exactly the areas where China has been trying to make improvements in its GPA offers, but it seems that the concessions are not sufficient.</p>
<p><i>China joining the GPA, but not yet</i></p>	<p>Looking at the six GPA offers that China submitted, the concessions made were extensive in three aspects, i.e. i) widened coverage of procuring entities and ii) of the relevant goods, services and works, as well as iii) lowered thresholds. Additionally, China went for a 3-year, instead of 5-year grace period to implement the GPA upon accession. Moreover, in China's 6th offer, activities in the fields of drinking water, electricity, energy, transportation, telecommunications and postal services have been offered, in late 2014, for procurement coverage, which is symbolic since these sectors are typically SOE-dominated. One has to read this offer with the knowledge that SOEs have not been offered as covered entities in China's GPA offers to date. Addressing the SOE question in earnest is a crucial offensive interest of the EU. What EU businesses insist on is that China offers more entities at more administrative levels and in more provincial territories with even more lowered thresholds. All these demands are in addition to the EU's</p>

	<p>insistence on establishing a more transparent and non-discriminatory institutional framework.</p>
<p><i>Public procurement laws for budget control, but the 'public market' is also a big trade issue</i></p>	<p>It is too little realised in the EU that the public procurement regime in the EU and in China have different purposes. The EU enforces transparent, fair and competitive public procurement across the EU's single market in order to generate (equal) business opportunities, drive economic growth and create jobs, but of course also to ensure that tax money is spent efficiently. In the old planned economy, where all property was collectively owned and given the overwhelming influence of the state in the past, regulating the use of public funds appeared redundant. Therefore, before the 1980s, there were no public procurement laws/regulations. Still today, public procurement is not seen as a component of trade, but rather as a device for budgetary control and discipline, and therefore a means to eliminate corruption and to use public funds more effectively. Negotiating China's GPA accession has served as an internal driver institutional reform of its public procurement system. The country has made much progress in regulating its public procurement market, now governed by various laws and implementing regulations, completed with a centralised website to publish information pertaining to tenders at central and local government levels.</p> <p>A mechanism of checks and balances has been installed, complete with a public-private-partnership model of cooperation in procurement of services and works. The country is now working to tackle accounting irregularities in the area of public procurement, as is seen from the Implementing Rules of the Government Procurement Law. One can appreciate these internal developments as one of many pillars of domestic reform. Still, China cannot continue to ignore that its public purchases and works represent a giant market that, in WTO circles, is not expected to be closed completely. And the suggestion of an FTA with the EU must imply the genuine preparedness to regard public procurement as a major trade issue as well. An FTA with China would be on a GPA-plus basis, if the EU has its way. Therefore, it is indispensable for China to join the GPA first, as a stepping stone to negotiate public procurement in an EU-China FTA.</p>
<p><i>Successful IPR cooperation, yielding sound (Chinese) IPR laws</i></p>	<p>Intellectual Property Rights (IPRs) are important to the EU's economic growth. It is estimated that IPR-intensive sectors account for around 39% of EU GDP (worth some €4.7 trillion annually) and, taking indirect jobs into account, up to 35% of all jobs. China, although having achieved remarkable progress in IPR protection in the three decades since the early 1980s, is still confronted with serious challenges of weaker IPR protection and enforcement, which adversely affects the country's ambition of becoming an innovative economy. EU businesses in China complain about non-transparency (judicial procedures), IPR online protection, admissibility of supplementary data for pharmaceutical product patent applications, trade secret protection and criminal enforcement against</p>

	<p>online copyright infringement, etc. Chinese authorities have actively engaged European businesses via public consultations and suggestions to improve its IPR legislation. However, the principal problem is implementation and enforcement. Chinese businesses in Europe have no complaints against the EU's IPR protection regime. Chinese enterprises, such as Huawei Technologies and ZTE Corporation, for example, are top patent applicants under the EPO (European Patent Office) filing system.</p>
<p><i>An FTA can follow a TRIPS-plus approach, but what about enforcement?</i></p>	<p>IPR chapters are found in all of China's recent FTAs, while the depth and breadth of protection measures are on the increase in recent years. In 2015, the IPR chapters in the China-Korea and China-Australia FTAs provide in great detail the degree and scope of IPR protection, taking a 'TRIPS plus' approach. The EU's IPR chapter in its FTAs is consistent in its position, which is to "complement and specify" the rights and obligations under the TRIPS Agreement, but with a much wider protection scope encompassing basically all international IPR treaties. The presumption is that the EU and China should be able to conclude an IPR chapter in an FTA because China's IPR policy/law is ambitious in providing protection that is in the country's best interest in transforming its economy into one driven by innovation. The only problem, but a major one on the Chinese side, is implementation (delays, inconsistency and enforcement). Counterfeiting has consistently turned out to be a problem when goods arrive at EU borders: Chinese goods (to be) imported into the EU seem to be champions in counterfeiting (some two-thirds of all detected cases).</p>
<p><i>Constructive approach to GIs</i></p>	<p>The EU, as the originator of geographical indicator (GI) protection, has taken the lead worldwide in identifying and protecting their GIs. China, as a latecomer to GI protection, has a range of local products corresponding to the concept of GIs, but only a few of them are already known or protected globally. At the end of 2012, 10 Chinese food names received protected status in the EU as GIs, as a result of the EU-China Geographical Indications "10 plus 10" pilot project. In June 2017, the EU and China each proposed a list of 100 GI products for protection under the jurisdiction of the other. As a result, it seems that the Agreement on the Cooperation on, and Protection of, Geographical Indications which the EU and China started to negotiate in March 2011, would conclude in the near future. GI protection in China is handicapped by fragmented registration and protection systems, which are often embroiled in disputes among different interest groups of businesses.</p>
<p><i>EU-China bilateral GIs with great opportunities</i></p>	<p>In 2016, China became the EU's second-top food export destination after the US in 2016 and China, the EU's 4th food supplier. Compared to 2015, the total food export amount from the EU to China in 2016 was valued at €11,385 million with an increase of 10.3%. China's demands for EU food are steadily growing in the last 10 years with, from 2006 to 2016, an annual rate of change of 23.7%. Additionally, as Chinese domestic consumers have deep concerns over food safety and the quality and</p>

	<p>origin of ingredients, EU firms are present with excellent opportunities to make huge commercial gains, if only they can penetrate the market (see tariffs, TRQs and SPS) and if the EU and China can agree to execute effective measures to protect its GI products.</p>
<p><i>China's FTA approach on GIs so far</i></p>	<p>Among the 15 FTAs that China has concluded so far, bilateral GI protection appears as a component only in the FTAs with Peru, New Zealand, Australia and Switzerland. More often than not, however, the provisions look 'best-endeavour' style, without substantive commitment. The EU and China are presently negotiating a 'comprehensive' agreement of cooperation and protection GI products, which undoubtedly goes further. Besides strengthening cooperation in the field of GI protection and supervision and combating counterfeiting, it should pave the way for more European GI-protected goods to penetrate the Chinese market, and vice versa on a reciprocal basis. Once completed, this would make it easier to negotiate protection of GIs under an FTA.</p>
<p><i>The CAI and EU-China investment</i></p>	<p>The EU-China negotiations on a Comprehensive Agreement on Investment (CAI) started in September 2012. The idea is to first negotiate a CAI and then to consider the exploration of an FTA, for the EU under reform conditions. In January 2016, the two Parties announced there would be a wide scope of the CAI negotiations, which should improve market access opportunities for their investors and guarantee that they will not discriminate against their respective companies, as well as to provide for a high and balanced level of protection for investors and their investments. Key challenges of the (mainly Chinese) regulatory environment, relating to transparency, licensing and authorisation procedures, are also on the table.</p>
<p><i>Why the CAI?</i></p>	<p>The two primary objectives of a CAI are to achieve market access for the EU and for Chinese investors (to each other's market) as well as modern investment protection. The far-reaching restrictions for foreign investors to enter and/or do business in many Chinese services and goods markets form a powerful motivation to negotiate a CAI. Data reveal that China is one of the most restrictive FDI regimes among 62 countries, including all OECD and G20 countries, and covering 22 sectors, such as agriculture, mining & quarrying (including oil extraction), manufacturing, oil refinery & chemicals, retail and transport. Thus, for China to create a level playing field for foreign companies already in China or for potential entrants is a very tall order. A second EU motivation is to overcome the fragmentation of investment protection for European firms due to <i>national</i> BITs with China, some of which are also hopelessly outdated and were concluded in the mid-1980s.</p>

Figure ES7. FDI restrictiveness index, 2016



Source: Authors' own elaboration using OECD Database (2018).

Deep asymmetry in FDI market access

Whereas EU companies face serious access problems in China, Chinese companies have relatively easy access to the European market, although complaints do exist, especially in relation to the movement of natural persons (mode 4, GATS). Investment obstacles in China are of two types. The first type consists of the overall Chinese investment strategy, based not so much on principles of free markets (with an exception here or there), but rather on categorising FDI in four classes: prohibited, restricted, allowed and encouraged. This regime is adapted over time so that it amounts to an industrial strategy or what are called 'structural policies' fitting the five-year plans of China. Therefore, access issues are found in the first three classes in various ways. The second type refers to 'post-establishment' when EU (and other foreign) investors experience an uneven playing field for doing business, i.e. a myriad of policy restrictions and forms of discrimination.

Can the CAI bridge the expectation gap (from today's FTAs)?

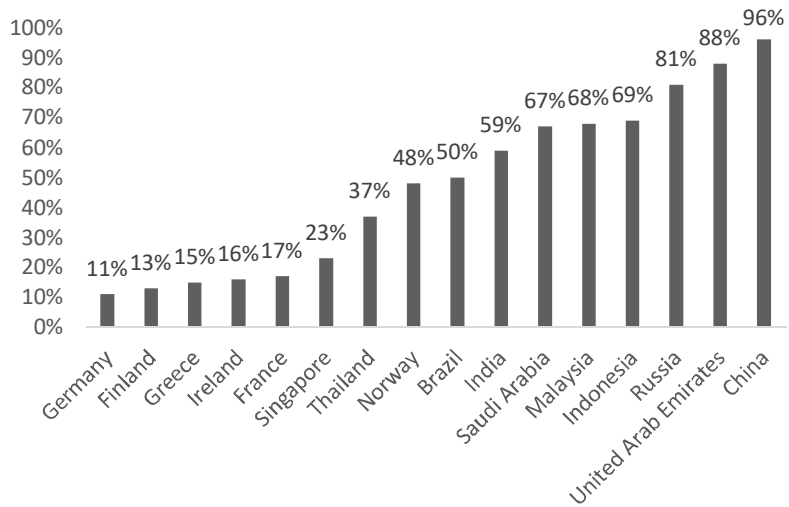
China is keen to further open up and also wishes to solicit 'external pressure' to push forward reforms, but it seems to be of two minds. Comparing the investment chapter under respective FTAs concluded by China and the EU, for China, substantive provisions on market access are left for further negotiations post-FTA. Moreover, what China has agreed to offer in terms of market access (pre- and post-establishment) typically reduces the EU's stance by half. For example, the 'pre-establishment' phase of investment is not covered under national treatment, while what is covered are "expansion, management, conduct, operation and sale or other disposition of investments in its territory". "Performance requirements" comply with the Agreement on Trade-Related Investment Measures (TRIMs) which are only applicable to trade in goods. In contrast, the EU wants cross-border "trade in services" as well as least-

	restrictive local services provision in most services markets to be included as a priority in the FTA.
<i>Linking the CAI to the FTA?</i>	The EU is determined to see a good outcome from the CAI negotiations, which, in turn, serves as a prior condition for beginning to explore an FTA. As for China, it should be expected to pursue its 'opening up' based on its own agenda. This agenda is full of pro-market reforms in very general terms but with, so far, very little to show in actual practice for business. Therefore, when pressing ahead with its CAI demands, the EU ought to ask itself what effective leverage it has. Will integrating CAI in an FTA not be a more sensible and effective option, or, would that further postpone the effective arrival of improved investment market access by a few more years?
<i>State-owned enterprises: The biggest legacy problem</i>	State-owned enterprises (SOEs) are a special but very important subject in EU-China trade and investment. An FTA cannot be negotiated without addressing in earnest this major legacy problem in China. SOEs, far from being treated in China in a non-preferential way and solely under commercial considerations (Art. XVII, GATT), are still strongholds of the old Chinese planning and economic system, despite several significant reforms in the last three decades. SOEs, which wield enormous market power in a series of large-scale industries and a range of services markets, are protected by a battery of restrictions (or outright bans). Their CEOs have received special blessings from the Party, they enjoy privileges in access to finance in a number of complex ways and have become frontrunners in China's FDI strategies abroad. But their productivity growth recorded over time is poor: private firms' productivity in China grows twice as fast, despite all the facilitation that SOEs enjoy.
<i>SOEs, new to China's FTAs</i>	<p>Economically and politically, SOEs are as much a liability as a formidable force. In recent years, some SOEs from China remain among the top-ten of the Global Fortune-500. Many SOEs are giant firms. In some sectors, however, they have created and maintained unbelievable excess capacities (in aluminium, ceramics and, above all, steel; in steel, with suggested loss coverage of many billions, possibly as high as €30 billion a year, if no open markets are found). If China wants to introduce effective and profound reforms, it cannot avoid the SOE issue.</p> <p>SOEs are also a liability in trade and investment relations. The China-Korea FTA does not incorporate a SOE chapter, although the intense Korea-China economic intercourse is profoundly influenced by the highly distortive and restrictive business environment. The EU and e.g. TPP (with a proper SOE chapter in the original agreement text) are adamant that the SOE question is seriously settled once and for all, for the good of China (a kind of pressure it often says it welcomes) and for undistorted market-driven economic relations with WTO partners.</p>

SOEs, a serious liability

Domestically, European businesses in China are discriminated against – there simply is nothing like a level-playing field vis-à-vis Chinese SOEs, while Chinese businesses in the EU enjoy national treatment, with access to judicial review if necessary. EU businesses in China express frustration over the lack of market access as well as the multitude of restrictions they face and long for reciprocity. Internationally, Chinese SOEs are the frontrunners of the country’s global investment, helped by guaranteed access to the government coffers [including frequently provincial and local ones] which seem bottomless. Their success in FDI may eventually backfire and begin to undermine the benefits from international trade and investment based on non-discrimination and respect for market principles.

Figure ES8. Share of SOEs among the top 10 firms in 16 selected countries (%)



Note: Only countries with shares above 10% are shown.
Source: Authors’ own elaboration using data from Kowalski et al. (2013).

SOEs and Chinese reforms

Following the Third Plenum in 2013, China pledged to reform its SOEs, reducing the subsidies they have enjoyed and diluting state holdings. But it remains to be seen how China will implement these measures effectively, within the set timeframe up to 2020. SOEs impede China’s implementation of an effective competition policy, too, since they do seem to be exempt from competition policy, following Art. 7 of the Anti-Monopoly Law (AML) of 2008. In the absence of specific implementing rules, this defeats the purpose of competition policy.

EU-China cooperation on

Otherwise, China is making rapid progress with competition policy. The EU and China have worked together in this field for many years and it is now beginning to show, particularly with respect to merger control. AML covers monopolistic operations having anti-competitive effects on

<i>anti-trust is fruitful</i>	the Chinese market (that is, operations within China as well as activities outside China, but also affecting the domestic market). EU competition law serves as the main reference for the AML on restrictive business practices, abuse of dominant position (cf. Arts 101 and 102, TFEU) and the EU merger Regulation.
<i>But deeper commitments and subsidies disciplines are desirable</i>	EU businesses complain that China's competition policy (AML, in particular, with respect to mergers) principally targets foreign businesses. But after a careful reality check, this allegation appears to hold little truth. Other complaints focus on implementation practice (especially the merger & acquisition transaction review), procedural rules, transparency and enforcement discrepancies in different localities with regard to price-related investigations due to local interest and protectionism. So far, China's competition chapters in its FTAs feature provisions on cooperation that are principles-based, but the EU prefers to negotiate commitments. It favours detailed provisions, not just soft-law approaches to substance, for example, on 'specific subsidies' which are permissible depending on proper justification, whereas blanket and unlimited subsidies should be prohibited. Such commitments would have a very significant effect on China's SOEs.

An EU-China FTA: Its economic impact and adjustment issues

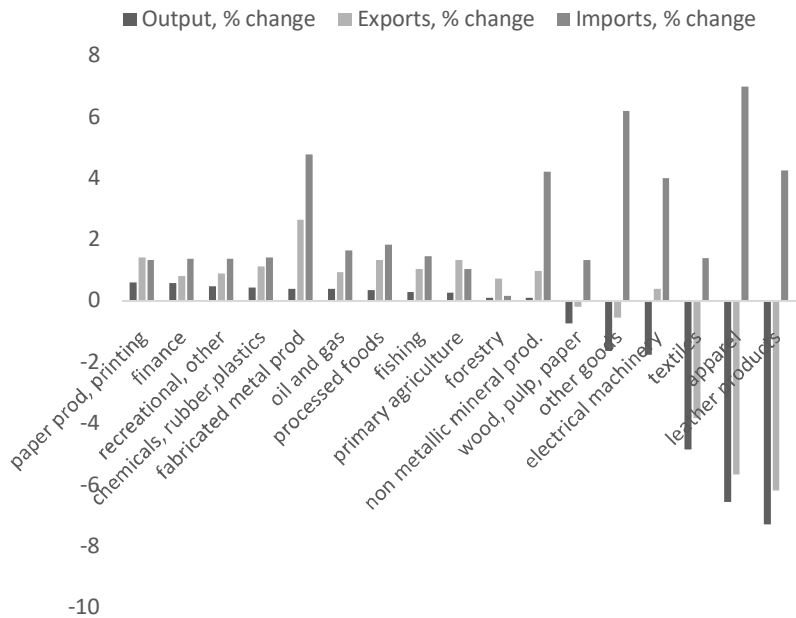
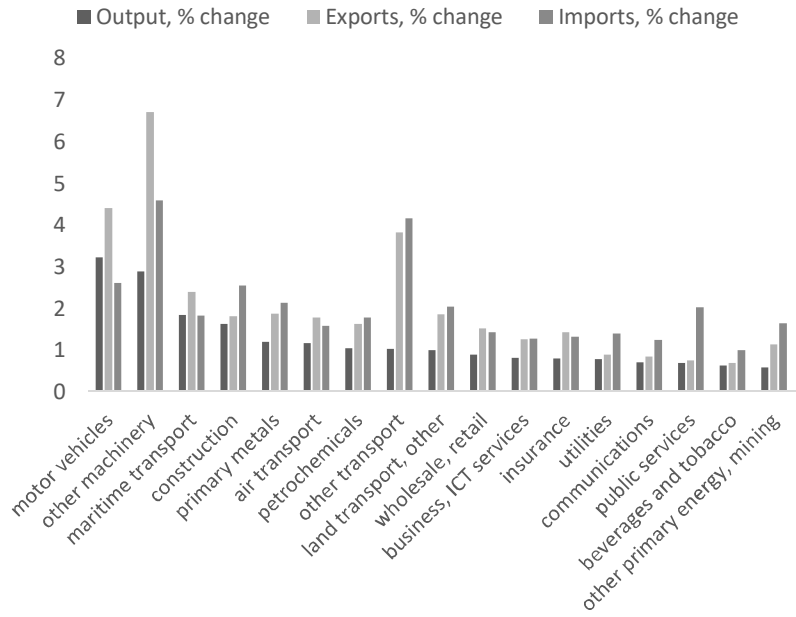
The study also provides simulation estimates of the economic impact of a stylised EU-China FTA. The economic impact is calculated with the help of a complex CGE model, the technical format of which is 'state-of-the-art', and with the newest GTAP 2011 world database, probably the best available anywhere. The economic impact is provided with respect to the effect on GDP of the EU and China, and of all the EU member states, as well as the effects on industrial and services sectors' output and bilateral trade. In addition, labour issues are studied. Wage increases are calculated for workers at three skill levels. Given the nature of the model (which does not allow the direct measurement of temporary unemployment, however, which might result from heavier competition in such an FTA), these wage increases occur for a given employment, assuming the immediate adjustment by all workers. Of course, these assumptions are unrealistic, which is why a separate section is devoted to this labour adjustment issue for workers in a few sectors where output is likely to shrink due to the FTA. However, in most sectors of goods and services, the simulation shows positive effects, also implying more jobs overall.

<i>How the economic impacts were empirically analysed?</i>	The stylised FTA (used in the model) has two variants: a 'modest' one with full removal of bilateral tariffs and 25% reduction in of the cost of regulatory barriers in goods and the same in services; and an 'ambitious' one, stylised with full bilateral tariff removal and 50% reduction in the costs of regulatory barriers on goods markets and also 50% reduction in the costs of regulatory barriers in services markets. Since, on the whole,
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	<p>the costs of regulatory barriers in goods and services markets are far higher than average tariffs, one should expect this 'deep and comprehensive' FTA, which addresses TBT and SPS issues as well as access to services markets, to generate greater economic effects than a tariff-only ('shallow') FTA.</p> <p>The term employed in the study and which is common in the literature is NTMs, non-tariff measures, which mostly boil down to regulatory barriers. Whereas empirical economic analysis of tariff removal has been well known for a longer period of time, the estimates of NTM costs – that is, the costs of regulatory barriers of tremendous complexity – is much more difficult. Since the simulation has used the newest estimates of the costs of NTMs, one must accept that these measures are nevertheless quite problematic and employed only because there is no better alternative. The relevant model chapters 18 and 19 therefore use the term 'actionable' NTMs, that is, the part of simple average NTM costs that can be reduced via the FTA. Although the costs of NTMs differ significantly between China and the EU (simple average of 36.7% for goods and 43.5% in services for China against 22.8% and 20.9% for the EU), the 'actionable' NTM reductions are also distinct: some 12.9% cost reduction of market access for the EU and some 22.3% for China. Such percentages are much higher than the average tariffs of the EU (less than 4%) and of China (8%). This is the fundamental argument why a 'deep' FTA is so crucial. China has substantially higher relative NTM cost levels for vehicles and services, while the EU has relatively higher NTM cost levels in low-wage sectors like textiles, clothing and footwear, as well as in paper and metals.</p>
<p><i>FTA's positive impact on GDP</i></p>	<p>The EU-China FTA is simulated to affect GDP positively: it will be (by 2030) 1.16% higher in China and 0.43% higher in the EU under the modest FTA, but 1.87% higher in China and 0.76% higher in the EU under the ambitious FTA. Because EU income is higher overall, the outcomes in money terms are more balanced: \$62.5 (now €55.8) billion for China and \$54.3 (now €48.5) billion for the EU in the modest case; \$99.7 (now €89.1) billion for China and \$93.2 (now €83.3) billion for the EU in the ambitious case.</p>
<p><i>Why the results are an underestimate</i></p>	<p>These results are an <i>underestimate</i> of the full economic effects for two sets of reasons. One set has to do with the intrinsic limitations of these models, despite their crucial general equilibrium characteristics (which incorporate all secondary effects to all markets and further responses as well, both domestically and in third countries). Several aspects are simply not included in such models but are bound to be affected by an ambitious FTA, such as: i) investment effects and their repercussions; ii) the trade-FDI nexus via value chains or intra-industry trade (in other words, with easier and freer FDI in China, EU-China trade in e.g. components) might be complementary; similar effects are likely for business services, too; iii) various dynamic effects (including innovation,</p>

	<p>new business models and IPR questions); and iv) the non-regulatory improvement of market functioning in China (e.g. if SOEs would be disciplined and no longer so super-dominant; also, improvement of transparency and governance, the lack of which is a major complaint of European business in China). Public procurement is also not 'in' in a satisfactory way, and this alone is a significant potential market in China, even when a small fraction would be eligible. Another set of reasons is more technical, mainly the problematic nature of the estimates of the costs of NTMs, in spite of efforts to improve this work. In particular, the cost levels of NTMs in services are suspected to be on the low side - one can observe that the opening up of services seems to contribute relatively little to the GDP effects and to increases in bilateral trade.</p>
<p><i>GDP effects for member states</i></p>	<p>Effects on GDP have also been simulated for all EU member states. The range of GDP changes goes from 0.47% for Portugal to 1.97% for Slovakia, in the ambitious FTA, while in the modest FTA, this range stretches from 0.27% (Portugal) to 1.34% (Slovakia again). All EU member states gain somewhat in both scenarios.</p>
<p><i>Powerful trade effects</i></p>	<p>EU bilateral exports to China increase strongly, by between 79.2% (modest) and 110.64% (ambitious), while there is a tiny drop in exports to the rest of the world. Overall EU exports go up by between 2.2% and 3.2%, respectively. China's exports to the EU increase by between 39.2% (modest) and 56.9% (ambitious), with a larger increase in total exports in value than for the EU. In addition, in China's case, there is a slight increase in exports to the rest of the world. Hence, the trade effects of the FTA are quite powerful, with more than a doubling of EU exports and a 60% increase in the already very large Chinese exports (of goods mainly) to the EU.</p>

Figure ES9. FTA effects on EU output, exports and imports (changes by sectors, ambitious scenario)



Note: Trade is with the world.
Source: Authors' own calculations.

<i>Real wages up for workers, three skill levels</i>	<p>The effects on real wages are as follows: China's real wage gains (in %) are smaller than overall GDP gains, while EU gains are somewhat higher. This reflects the respective patterns of trade. The EU imports much more consumer goods than vice versa – indeed, a large portion of EU imports of goods are 'mass consumer goods' which (can) directly raise real disposable income of EU consumers via a reduction in the cost of living insofar as such imports from China are cheaper than local substitutes. One also observes a wide range of effects in EU member states, ranging from 1.66% for real wages in Slovakia to 0.24% for real wages in Greece, under the ambitious scenario. According to skill-levels variations, the greatest real wage gains in the EU in percent terms are for low-skilled workers, with an EU average of 1.13% in the ambitious FTA scenario. That figure hides a great deal of variation, however, with Belgian and German low-skilled workers enjoying a 2% increase [2.01% for Belgium and 1.90% for Germany], and rather small gains in some lower-income EU countries [Portugal (0.14%), Greece (0.30%), Romania (0.41%) and Bulgaria (0.43%)].</p>
<i>Adjustment for workers, in the model used</i>	<p>The CGE estimation does not confirm the conjecture that (some) EU low-skilled workers might suffer income losses from an FTA with China, as in all EU countries the workers see real wages increase in both scenarios. This probably means that the EU, in the recent past, has <i>already adjusted</i> quite far to the strongest comparative advantages of China. The FTA is not likely to lead to a drastic new downward adjustment in sectors with relatively many low-skilled workers, although a few shrinking sectors will be observed. It can also be interpreted as a result of second-order effects (in general equilibrium), for instance, that the overall rise in economic activity – due to the FTA – also benefits the sectors under some competitive threat. Finally, one has to realise that, <i>in the model</i>, and of course <i>not</i> so fast and <i>not</i> so smoothly in actual practice, workers adjust via immediate re-allocation between sectors. This model-approach has the effect that, on the one hand, workers in marginally contracting sectors can minimise a wage decline via the re-allocation of some of them, and, on the other hand, the mobile workers can join in the expansion of the sectors enjoying increasing demand.</p>
<i>Between minimum and maximum labour displacement</i>	<p>Since the CGE model is based on 'given' employment, no simulation of induced, temporary unemployment can be generated: all initial workers retain a job, but perhaps a different job in a different sector at a different wage. However, a proxy of the other extreme, namely, all workers are mobile "in the model" between sectors, can be roughly calculated. This approach is very extreme, as it suggests that not a single one of these 'mobile' workers would be absorbed immediately in another sector. But such an extreme scenario never happens in actual labour market practice, and it also disregards several other key issues. So, in assessing adjustment issues to a EU-China deep FTA at this stage, one is found in between no induced unemployment – as the great flexibility of workers</p>

	<p>and their wages in the CGE model generates perfect and immediate adjustment – and a theoretical maximum ‘labour displacement’, if no adjustment whatsoever would take place, at least not immediately. The study shows that labour displacement in this extreme sense will be strongest for low-skilled workers in the EU (some 2% of the EU labour force and a little more for China). The member states that would be more affected are Malta, Slovakia, Germany, Finland, Hungary and Italy. Unfortunately, there is no rigorous analytical way to determine in between these two extremes, how large or small the job losses caused by the FTA would be.</p>
<p><i>Why workers’ adjustment is manageable, even if painful</i></p>	<p>It is undeniable that jobs are lost every day in labour markets, but the study cites four critical considerations that can go far in mitigating highly pessimistic expectations. First, CGE models ignore (they are ‘static’) several options that are available to workers to deal with bad news. In actual practice, workers do anticipate, especially in vulnerable sectors, competitive threats and may (and do) seek to work elsewhere; they may seek private upskilling or even re-training; they move to other regions (even if, in the EU, such mobility is not very high, it is not irrelevant); they retire and if adjustment takes years, this does reduce pressures. Second, companies have options, too, and often exercise them. Only some companies in vulnerable sectors are relocating towards lower-wage countries (even inside the EU) or exit from the market. Companies also seek to upgrade their product portfolio, thereby reducing their vulnerability vis-à-vis China; they may widen their portfolio as well; they may invest in innovative products or variations; or change their business model e.g. with a combination of different ‘tasks’ in global value chains.</p> <p>Third, the design of the final FTA may (and usually does) anticipate the adjustment problems by explicitly using ‘time’ as a factor. In the case of vulnerable sectors with relatively more low-skilled workers, the tariff reductions are typically back-loaded, i.e. they are known when the FTA treaty is concluded, but become actually relevant only after a number of years (say, after 5 or 7 years of the 10 years assumed throughout this study). This back-loading facilitates the adjustment, so that labour displacement need not, or to a much lesser extent, lead to job losses, without immediate prospects.</p> <p>Fourth, ‘time’ also plays a crucial role for another, perhaps even more important reason. China is still growing more rapidly than the EU and this will continue for the entire period until, say, 2030. In those 13 years or so, Chinese wages will rise fast and comparative advantages precisely in low-skilled-intensive sectors will become less pronounced or fade away. Moreover, the famous ‘unlimited supply of unskilled labour’ in China (coming in from the western or central countryside) has dried up and is actually shrinking, whilst rapid growth in services (with a range of skill levels) will compete with labour demand for low-skilled industrial sectors. None of this can be incorporated in the CGE model,</p>

	<p>even when some anticipation of income levels in 2030 has been applied. Taken together, these four considerations significantly brighten the otherwise sombre outlook for low-skilled workers.</p>
<p><i>Member states (helped by the EU) should commit to active labour market policies</i></p>	<p>What labour displacement remains, due to the FTA, even when the periods of temporary unemployment are not known in advance, should be properly addressed by explicit and clear policy action. Some of the cushioning is automatic, given the welfare state. But ‘active labour market policies’ are required, whether in the form of (effective) re-training, upskilling, job search support, etc. But it should also be noted that there are limits to what can and should be ‘attributed’ to the EU-China FTA. Job losses occur all the time and for many reasons (whether IT or automation, bad management, shifts in demand to other products or services, new business models, etc.) and one has to be careful not to single out one individual FTA as the source of job losses. And the gains in jobs (far greater due to the FTA than the losses) do help as well.</p>

Overall policy implications

A FTA between China and the EU is worthwhile for a host of reasons. The economic potential in bilateral trade is shown to be large (more than a doubling of what are already very large trade flows both ways), and this does not include expected powerful investment effects (which, unfortunately, are resistant to modelling, so no hard estimates) and their repercussions for bilateral trade in goods and services. It would also be positive for GDP and jobs. Strategically, the FTA should be significant, because it can only succeed when China implements the reforms it has announced and complements them with additional ones such as on SOEs and the opening of public procurement. In this sense, the FTA is even more beneficial for China than for the EU (the model cannot incorporate these aspects). It goes to confirm that a deep and comprehensive FTA is a perfect ‘fit’ for China at its current stage of development, expressing the ‘new logic’ given its announced reforms, whilst the EU can finally pursue the ‘logical sequel’ in its trade policy vis-à-vis dynamic East Asia.

INTRODUCTION

Although fascinating as an idea, until only a few years ago it seemed far-fetched to pursue liberalised trade and investment between China and the EU in the form of a modern, deep and comprehensive free trade area.¹ This idea was catapulted to the near-future agenda when President Xi Jinping, openly called upon the EU and China to explore its potential in the spring of 2014. Since then, the EU is slowly becoming accustomed to what in Brussels is still regarded as a very ambitious thought. EU Trade Commissioner Cecilia Malmström (2016) clearly stated that a free trade area with China would be subject to two major conditions, but in principle, these conditions are in line with avowed Chinese trade, investment and domestic reform policies.

The authors of this book have attempted to map most of the elements that would form a possible free trade agreement (FTA) between China and the EU and made every effort to understand the main implications of such an initiative. They also analyse and simulate the economic impact of a possible FTA. There is no true precedent for this work.²

Part I provides a rationale for an EU-China FTA and attempts to embed the idea in the recent trade strategies of the partners, trade and investment trends, and global value chains (GVCs), which often end in China.

Part II is about the substance and the 'how' of such an initiative, based on the notion of a 'deep and comprehensive' FTA. It comprises an in-depth empirical analysis of tariffs in industrial and agro-food trade, tries to position trade remedies in such a deep cooperation, and discusses in some detail the technical barriers to trade and the sanitary and phytosanitary measures (SPS, for food & feed plus plant health). It also analyses public procurement on both sides, as well as intellectual property rights (including geographical indications), state-owned enterprises and related competition policies (all bones of contention). Part II ends with two chapters that are bound to be

¹ However far-fetched, one might wish to compare this with an early contribution by Fukasaku & Pelkmans (1995) on 'open continentalism' between East Asia and the EU.

² In 2008, a sustainability impact assessment was undertaken for the efforts at the time to negotiate a partnership and cooperation agreement (PCA) between China and the EU. This study does entail a considerable amount of economic analysis, for the simple reason that the agenda for the PCA was, unusually, full of economic and trade cooperation. Nevertheless, the subject matter and the substantive analysis can only very partially be compared with the present work. The PCA was never attained. See Van der Geest et al. (2008).

part of any FTA strategy with China: the current investment negotiations and the problem of socio-economic adjustment.³

Part III employs a cutting-edge, CGE-model approach to simulate the economic impact of a stylised EU-China FTA. Results are provided for both a modest and a more ambitious FTA. The chapters deal with the effects on GDP and on trade – also by member state and by sector – and a proxy for the temporary unemployment of workers moving between sectors in both economies. In addition, the analysis has been refined by distinguishing three skill levels of workers.

³The present volume does not have a chapter devoted to trade and sustainable development, although the inclusion of such a chapter in the FTA with China would be a necessary condition for the EU. Every recent FTA negotiated by the EU comprises such a chapter. Sustainable development is also a topic addressed in the ongoing investment agreement negotiations between the EU and China (see chapter 15).

PART I. THE GLOBAL AND BILATERAL CONTEXT

1. Why an EU-China free trade area?

1.1 The context for a free trade area study

The idea of a free trade area with China has received very little serious attention to date by scholars either in China or in the EU. Since late 2012, the EU has been negotiating a bilateral investment treaty (BIT, under the more encompassing label of a comprehensive agreement on investment, CAI) at the EU level, integrating, updating and extending the 26 BITs China already has with EU member states. Sixteen rounds of negotiation have been completed (the last one in December 2017) and it is unknown when these negotiations will be finished (see chapter 15). A decade ago, the EU and China engaged in negotiations on a partnership and cooperation agreement (PCA), meant to cover – besides the usual technical and political cooperation in such PCAs – forms of economic cooperation (see Box 1.1).

Box 1.1 EU-China: From a trade deal through the PCA talks to a free trade area?

China and the European Economic Community (EEC) established diplomatic relations in 1975. Ever since, the economic relationship has been the core of the bilateral relationship, especially with a growing series of agreements on economic cooperation. These include the Trade Agreement between the European Economic Community and China in 1978, the EU-China Trade and Cooperation Agreement of 1985, and the EU-China Strategic Partnerships in 2004.⁴ In 2007, negotiations on the EU-China Partnership and Cooperation Agreement were launched, based on two pillars: political cooperation (e.g. on democracy, human rights and governance), and trade and investment liberalisation, mainly in the form of trade and investment facilitation. However, during the PCA negotiations divergent expectations between the two sides made progress difficult, despite China's accession to the WTO and its follow-up, and despite similar political exchanges in the far broader framework of the Asia-Europe Meeting (ASEM). The EU favoured ambitious provisions to facilitate trade and investment, e.g. on intellectual property, public procurement and rules for the establishment of EU businesses, while China had a much lower level of ambition and preferred an agreement built on broad cooperation and

⁴ See Snyder (2010), pp. 7-45. A precise chronology of official EU-China relations can be found on the website of the European External Action Service, "EU-China Relations: Chronology" (http://eeas.europa.eu/china/docs/chronology_2014_en.pdf).

dialogue principles. In the end, the PCA negotiations were discontinued, although a quarter of 22 chapters had been finalised on the trade and investment side and another quarter close to finalisation.⁵

At the 15th EU-China summit held on 20 September 2012, China and the EU agreed to launch negotiations on a bilateral investment agreement. Negotiations started in January 2014, and the second round of talks took place on 24 March 2014, before President Xi's visit to Brussels. During his visit on 31 March 2014, President Xi made a plea for negotiations on an EU-China free trade agreement (FTA) and proposed a joint 'feasibility study'. The EU-China summit joint statement issued on 29 June 2015 declared that, once the conditions were right, concluding a comprehensive EU-China investment agreement would lead towards a deep and comprehensive FTA as a longer-term perspective.

The PCA negotiations failed. Because the European Commission has favoured the route of ad hoc but broad economic and technical cooperation, especially after the stranded PCA discussions and given the current negotiations on an investment treaty, there has apparently been little or no interest in analysing the idea of a free trade area.⁶ The EU is also interested in the plurilateral route, i.e. persuading China to join several plurilateral WTO agreements under negotiation. These include the Information Technology Agreement 2 (ITA 2, an upgrade and modernisation of the information and communications technology (ICT) goods agreement that eliminates tariffs on ICT goods by a critical mass of WTO countries trading in these goods; China is a member of the ITA 1, and ITA 2 was formally concluded in Nairobi in December 2015). In addition is the green goods agreement⁷ and the Trade in Services Agreement (TiSA), which is attempting to move significantly beyond the disappointing set of commitments on trade in services under the General Agreement on Trade in Services (GATS); China is not yet 'in'. Also, since 2007, China has made a series of offers following its promise when acceding to the WTO in 2001, to become a member of another existing plurilateral, the Agreement on Government Procurement (GPA), but so far these offers have been regarded as insufficient in order to admit China to the GPA (see also chapter 12).

It is certainly justified to study a possible FTA with China in terms of alternative policy options and/or how an FTA could be best combined with the other two valuable routes, namely, building on the extensive *cooperation* already existing with China, and the prospects for China going more and more *plurilateral*. In this context, the questions

⁵ See European Commission, "Trade Relations with China", Memo, DG Trade, Brussels, July 2010.

⁶ For the PCA negotiations, however, which were meant to be 'ambitious' (at least for the EU side), a massive study was undertaken in the form of a trade sustainability impact assessment by a group of 36 analysts led by Willem van der Geest. This study attempted to conduct impact analysis based on a CGE model for some elements and a partial equilibrium (sector approach) model for five sectors, besides extensive qualitative analysis of sustainability aspects. The premise of the report, which is in itself very informative, is a somewhat artificial one, namely that the PCA would generate so much and effective bilateral trade facilitation that the 'liberalisation effects' can usefully be simulated. In this way, the distinction between a possible FTA and this assessment of effective and widespread facilitation, also in regulatory domains, begins to be blurred. In this special sense, one might argue that the Van der Geest et al. (2008) study is a forerunner of some elements of our study.

⁷ Officially called Environmental Goods Agreement, it is under negotiation; China is 'in'.

asked are *whether and to what extent an FTA with China would add value to one or the other approach or to both*. Clearly, the more shallow the possible FTA with China, the less room there would be to generate much value added beyond the other two routes. The obverse is equally interesting: the deeper and more comprehensive the FTA, the greater the possibilities that at least some elements of the cooperative route and specific segments of the plurilaterals can be better dealt with in the FTA framework. Therefore, once one delves into the substance of a possible FTA, in particular a comprehensive and deep FTA (as the EU has strongly favoured for all its FTAs since 2006), the context has to be broadened to cooperative activities in a wide sense and in the plurilateral and possibly even multilateral arena.

1.2 Is there a case for an EU-China FTA?

It is striking that neither China's President Xi nor Prime Minister Li Keqiang have advanced a rationale for their suggestion to launch a feasibility study for such an FTA. Of course, this does not mean that such a rationale does not exist, or that it cannot be constructed by reasoning and on the basis of informal discussions in China and the EU. But it does mean that there are no clear quotations available about the rationale from the Chinese or EU authorities. In China, one generally sees the suggestion from the Chinese leadership to engage in a feasibility study about an EU-China FTA as an implicit invitation to the EU political leadership to signal some basic political will and interest in taking the next step, no matter how cautiously. In other words, the official reaction of the EU that the EU-China CAI negotiations must be completed first is well understood in China, but owing to the fact that at first, no more was said about the eventual willingness to engage even in a feasibility study, suspicions arose about the EU's preparedness for or interest in a bilateral FTA. The June 2015 EU-China summit declaration attempted, in very modest ways, to mitigate this sense of suspicion. Commissioner Malmström (2016) inched further in accommodating the FTA option, albeit under two conditions (see chapter 5). Whatever the several specific rationales of an FTA between China and the EU (as discussed below), the basic logic is compelling from the EU side.

Ever since 2006 (the Global Europe strategy), the EU has actively pursued FTAs with 'dynamic' East Asian economies. An FTA with Korea has been functioning for years, and two FTAs (with Singapore and Vietnam) are under ratification. Negotiations with Japan have been concluded and the FTA text is undergoing 'legal scrubbing' in early 2018. Negotiations on FTAs with Thailand and Malaysia are ongoing, whereas the Philippines and the EU decided to start negotiations in May 2016. Shortly thereafter, FTA negotiations with Indonesia have been launched as well. These dozen years of EU FTA activism in East Asia prompt the query: Where is China in this list? China is by far the biggest East Asian economy and was (and still is) very dynamic indeed. China is a logical sequel to the EU's trade strategy in East Asia.

Let us therefore turn to the broad set of possible rationales for such an FTA. We discuss five such rationales.

The first argument – of great importance economically – is that the potential for intensifying EU-China trade and investment relations is still enormous, despite the impressive growth in bilateral economic ties the two economies have already experienced. This argument cannot be surprising. It is typically advanced for every FTA to be negotiated. But our study shows in considerable detail that this potential is large relative to what has already been accomplished in EU-China economic relations as well as absolutely large given the size of the two economies. Also, the rigorous economic simulation based on the CGE-GTAP model approach in Part III of this study – which, given the model's limitations, can only simulate part of what a deep FTA would comprise – provides respectable ammunition for this argument. Knowing that CGE simulation only covers part of a 'deep and comprehensive' FTA, it would have to be complemented by a qualitative assessment of the potential based on other elements of the FTA.

Of course, China is a special case, not only because of the size of its economy and population, but also because of the expected reforms and structural changes in the next 15 to 20 years. Therefore, plain extrapolation is not appropriate. Indeed, to be plausible, the qualitative economic arguments would have to incorporate the expected shifts in comparative advantage and the new competitive edges of China in the near future, but equally well the combination of domestic reforms and related greater openness of the Chinese economy, precisely to accommodate and stimulate the activities (especially, but not only services) enabled by these liberalisations. One should also expect a significant and structural shift towards relatively greater domestic consumption. In the present study, the implications of these points are elaborated in several ways.

Second, an equally unavoidable argument in favour of an FTA with China is found in the domino or 'me-too' character⁸ of today's evolution in the landscape of FTAs in Asia, if not the entire world economy. This argument is about bilateral FTAs. Both China and the EU have been quite active in concluding FTAs, and in some cases with the same economies. In the absence of new engagements at the multilateral level (certainly not after Nairobi), and dependent on the success of (and full Chinese involvement in) the four plurilaterals mentioned, the logic of not concluding an FTA with China as a very important trade and investment partner of the EU (and indeed, the EU for China) becomes ever harder to defend, when the two continue an active pursuit of new FTAs with one another's partner countries. Thus, the EU has an FTA with South Korea, and now so has China; the EU has negotiated with Japan, and so has China. The EU intends to negotiate an FTA with Australia and New Zealand, and China already has better access through an FTA. The EU negotiates with several countries of

⁸ The domino theory (see e.g. Baldwin, 1993) essentially holds that FTAs concluded by partner economies A and B generate a strong incentive to eliminate the trade diversion or margin of discrimination for excluded country Y by also concluding an FTA with one or more of the partners. This simple idea has proved to be a powerful explanation of the FTA waves witnessed since the late 1990s. The 'me-too' idea (see Pelkmans & Brenton, 1999) is similar, but here the emphasis is on relatively small partner economies desiring an FTA with a giant partner, as small partners often have a high share of exports with that one giant economy, and cannot afford to experience discrimination.

the Association of Southeast Asian Nations (ASEAN),⁹ but China already has a China-ASEAN FTA framework and several country-based FTAs with ASEAN members. The domino/me-too incentives to conclude FTAs need not be too dangerous to the world economy – although they are second-best to effective multilateralism – as long as the FTAs are strictly in conformity with the WTO, build on its foundation and take the form of many specialised agreements in so-called ‘WTO-plus’ approaches of higher ambition.

Third, a more recent and additional argument for an EU-China FTA is found in the rise of ‘mega-regionals’. Nowadays, FTAs are no longer only bilateral but also ‘regional’ or even wider or more important (mega-regionals). Of course, the EU has been a forerunner with a network of FTAs in Europe itself (some are linked with a prospect of EU membership, whereas this is not the case for other such FTAs in the framework of the Neighbourhood Policy) and with African, Caribbean and Pacific (ACP) countries. Perhaps the North American Free Trade Agreement (NAFTA), in force since 1994 and being renegotiated by the Trump administration) may be seen as a mega-regional.

The European approach was more or less mimicked by ASEAN after it had implemented the ASEAN Free Trade Area, by concluding a string of (shallow) FTAs with East Asian countries, Australia, New Zealand and India. This is an outcome of the ASEAN plus Six,¹⁰ itself a direct consequence of the strong trade and investment dependence of ASEAN, rendering it vital for ASEAN to secure and deepen market access for export purposes, including the activities of global value chains. The FTAs of the ASEAN plus Six are a testimony of how powerful the domino and me-too incentives are, because ASEAN itself is not a customs union, let alone a higher form of economic integration with common institutions and powers, but a free trade area *without* a common trade policy! Therefore, a cumbersome and fully intergovernmental approach to negotiating these FTAs had to be accepted, with a follow-up on a(n) (ASEAN) country-by-(Six)-country basis. Late 2012, the ASEAN-plus-Six approach was taken to a higher level as the Regional Comprehensive Economic Partnership (RCEP). The ASEAN plus Six used ASEAN as the ‘hub’ with FTA ‘spokes’ vis-à-vis the Six other economies. But these Six are also concluding bilateral FTAs with each other, as noted above. The RCEP is an attempt to create coherence and avoid incompatibilities (e.g. due to origin rules) between the various East Asian (plus India) FTAs, if not accomplish the further move of a shallow but more or less tariff-free East Asian FTA in goods. Given that the EU has prioritised an East Asia FTA strategy since 2006, the RCEP is of obvious importance for the EU as it incentivises even more the completion of its East Asia strategy of better market access.

⁹ An FTA has been concluded with Singapore; an FTA has been signalled and with Vietnam; negotiations are underway with Malaysia, Thailand and at the same time, also, the Philippines; scoping discussions for an FTA with and Indonesia (based on a preparatory joint study by the High Level Group in 2011) have stopped but not been abandoned.

¹⁰ The Six are China, Japan, South Korea, Australia, New Zealand and India.

Another 'Pacific' initiative, the Asia-Pacific Economic Cooperation (APEC, a kind of leader-driven OECD, Pacific-style)¹¹ emerged and began in earnest in the early 1990s. APEC has stimulated voluntary tariff liberalisation under so-called 'open regionalism' and various forms of improved market access, including, e.g. selected mutual recognition agreements (MRAs, on the results of conformity assessments) to reduce technical barriers as well as basic investment agreement principles. Yet APEC not only includes countries with vastly different levels of development, but also has to accommodate members having rather diverse preferences about the speed, ambition and depth of Pacific trade and investment liberalisation. The voluntarism and slow speed of liberalisation in the APEC region eventually led to the formation of a subgroup of 12 'able and willing' APEC members, eager to go forward and deeper.¹² This led to the Trans-Pacific Partnership (TPP) negotiations, concluded in October 2015. The TPP is deeper and more comprehensive than the RCEP is expected to be, which would give it a kind of leadership in Asia, if not worldwide, were it not for the fact that China is not in it (neither are some other important and swiftly rising economies such as Indonesia and the Philippines).¹³

This has led some commentators to suggest that China is 'isolated' or 'contained' by US leadership in the TPP. Before rushing to conclusions, it should be considered that a) all TPP countries trade very actively with China and most also have investments there, b) China has concluded FTAs with some TPP countries and may conclude more and c) as an APEC member, China has the right to join the TPP at any time, subject to agreement by the 12 signatories, even though it has spread messages that the TPP is in some respects too ambitious. At the 2014 annual conference of APEC leaders, held in China, China obtained acceptance by APEC for a feasibility study on an APEC-wide FTA, connecting the RCEP and the TPP. In recent APEC summits, this all-APEC proposal has remained on the agenda, but it seems unlikely to be actively pursued until RCEP is concluded. Still, given the highly dynamic nature of the global FTA scene and taking into consideration that China is continuing to grow quite fast while engaged in a domestic reform process, which should eventually help to facilitate further opening, the TPP is surely generating incentives for China to seek deeper engagements in trade and investment with its principal trading/investment partners. And if that is made more difficult by not being able to join TPP at this time, it logically turns to its biggest trading partner of all, the EU!

¹¹ APEC has twenty-one²¹ member countries, including the three NAFTA countries, Peru and Chile, as well as Japan, South Korea, Hong Kong, Chinese Taipei, China, Russia, Australia, New Zealand, Papua New Guinea and seven of the ten ASEAN countries (Myanmar, Laos and Cambodia are not members). See www.apec.org for further details.

¹² The countries involved are the three NAFTA countries, Chile and Peru along with Japan, Australia and New Zealand, and four (of the ten) ASEAN countries (Malaysia, Vietnam, Brunei and Singapore). Note that South Korea, China and (of ASEAN), e.g. Indonesia, Thailand and the Philippines, are not involved.

¹³ That South Korea is not in has more to do with the fact that the country has already concluded FTAs with the leading TPP countries, and some of these FTAs (e.g. KORUS) are advanced FTAs.

Since Trump has become President of the US, however, the FTA scene in Asia-Pacific has changed once again: in the spring of 2017, the US withdrew from TPP. After a period of reflection, the other TPP countries agreed to continue with a somewhat revised FTA treaty called CPTPP (Comprehensive and Progressive Trans-Pacific Partnership), which is essentially the same text, except for a few clauses the US insisted upon, against the preferences of most other members.

This logic is further strengthened by three other FTAs, at least one of which is another mega-regional: the Comprehensive Economic and Trade Agreement (CETA),¹⁴ the Transatlantic Trade and Investment Partnership (TTIP)¹⁵ and the EU-Japan Economic Partnership Agreement. These involve four economies that used to be the joint leaders of the General Agreement on Tariffs and Trade (GATT), formerly known as the Quad countries. Their economic prominence and strong traditional adherence to the GATT and WTO obviously makes Beijing wonder how and how much it would be affected, and what strategies can be employed to offset or at least mitigate the negative fall-out from such important FTAs or mega-regionals. An FTA with the EU would at least secure and presumably improve market access and also tie in the EU more firmly as a partner of China in the East Asia region. It would offset to some degree the trade diversion effects of the CPTPP. And an EU-China FTA would serve China to experiment and move up the ladder of ambition for its FTAs, as China knows that the EU would only be interested in an ambitious and comprehensive FTA, nothing less. In short, mega-regionals have created powerful incentives for China, and to a lesser degree for the EU, to seek an FTA with its most important trade and investment partner.

Fourth, China has engaged in continual reform for decades, but in 2013, it decided on courageous new plans for structural and deep reforms of the economy on the route to what it calls a 'socialist market economy'. The reforms are mainly motivated by the present development model of China running out of steam. The reliance on heavy industry (with overcapacity in a range of sectors), large-scale assembly operations with low-skilled labour input (in turn relying on a cheap, seemingly endless inflow of such labour from the countryside, which is now drying up),¹⁶ relatively little innovation, a neglect of services domestically as well as in global value chains, the prominence and protection of state-owned enterprises (SOEs) have together led to significantly lower productivity growth than for private firms, along with a neglect of sustainable development. Given this incapacity to deliver further impetus to Chinese growth, higher and rapidly rising wages and the urgent attention to a healthier environment for citizens and workers, China will have to generate higher value added in global value chains and domestically. This is bound to be linked, sooner or later and in various ways,

¹⁴ CETA refers to the EU-Canada FTA, subject to ratification. Its provisional application is already in force.

¹⁵ The US-EU FTA, under the heading of the Transatlantic Trade and Investment Partnership, is under negotiation. but since Trump's election, it has been put on hold. In economic terms, TTIP is the largest of all FTAs concluded or under negotiation, with the TPP coming close as also being a genuine 'mega-regional'.

¹⁶ Every year, this inflow shrinks by around 3 million workers.

with the opening up to and competitive stimulus from foreign entrants in local markets and for example, cross-border trade in services. It would imply more effective discipline and fewer privileges for SOEs (in turn, creating a more market-driven environment in China, possibly leading to higher productivity of SOEs) and a greater reliance on legal certainty for market players in many respects.

The 2013 Reform Decision by the Communist Party's Third Plenum¹⁷ is an impressive document with principles and reform outlines that would seem to promise a major leap towards a better functioning and more open market economy. The question is now whether China can actually bring off the effective implementation of this vision and accept the numerous and at times painful implications. There is a great 'thirst' in China for outside pressures to encourage and push this reform process, both market competitive ones as well as governmental ones through discipline, opening up and policy cooperation. And FTAs, not to say 'deep' FTAs with trusted partners, seem to China to be an almost ideal form of organising or generating such reform pressures, through partnerships. The EU is regarded by China as such a partner, possibly, and the EU, in turn, is only too keen to stimulate China to pursue these reforms (especially now that they come from within China and have been decided by its own leadership).

Since the Reform Decision, there have been modest and selective reforms but nothing anywhere near the ambition expressed in November 2013. In 2017, right after President Xi Jinping gave his pro-globalisation speech at Davos, the Chinese government (State Council) published its now famous Document no. 5 with 20 reform headings which – together – would signify considerable opening up of services markets and FDI (see chapter 15, Box 15.1). Foreign companies in China have expressed frustration with ever-repeated promises that are not followed up in actual practice. One may regard the eventual FTA talks with the EU as a concrete incentive to engender concrete moves inside China towards more ambitious reforms.

Fifth, there may well be strategic and geopolitical reasons for China, and perhaps also for the EU to seek broad, deep and lasting bilateral commitments and partnerships, and an FTA entails commitments of the strongest order. China has undoubtedly been concerned by the combination of the TPP and TTIP, and not merely for economic reasons. APEC has failed to prevent these developments in the case of TPP. One might surmise that China may well regard these new mega-regionals, in which it is not – so far – engaged or accepted, as geopolitical manifestations of possible or future alliances that might eventually induce an undesirable degree of isolation, or at least a lack of 'friends'. It has sought deeper cooperation with the BRICS (Brazil, Russia and India besides itself, plus South Africa), intensified its relations with Africa. It has also cautiously welcomed better cooperation with Russia directly and initiated major initiatives (e.g. in infrastructure and its financing) for Central Asia (such as the Belt and Road Initiative or BRI)¹⁸ and the Asian Infrastructure Investment Bank (AIIB, with many EU countries also contributing) and Eastern Europe – in the China-plus-16 talks.

¹⁷ See "The Decision on Major Issues Concerning Comprehensively Deepening Reforms in brief", at www.china.org.cn/china/third_plenary_session/2013-11/16/content_30620736.htm.

¹⁸ At first, under the names of new Silk Road and One Belt One Road. For an in-depth historical survey, see Griffith (2016).

But none of the leading economies is involved in these initiatives, or only in a very marginal capacity. China has also engaged in FTAs with its direct neighbours South Korea and Japan (still under negotiation), after many years of joint preparation of 'feasibility' studies, despite (or some suggest, precisely because of) the frictions about tiny uninhabited islands between the three. One might argue that the EU is an ideal geopolitical partner for China, as the EU is by definition a 'civil' union, serves as its largest trading partner and a leading investment partner (and perhaps soon with a BIT in the form of the CAI), while the absence of military or political influence in the Pacific pre-empts grave political frictions in its immediate hinterland. Whether and to what extent the EU would share this view, is debatable. In any event, for the EU an FTA is not primarily a political tool but there is no denying that a deep and comprehensive FTA with China is bound to have lasting diplomatic and other implications.

Besides these five rationales, there is the additional argument of 'joint leadership' (Hu & Pelkmans, 2017). Given the possibly disruptive trade policies of the Trump administration, China and the EU have both stood up and expressed strong support for what one may call 'responsible globalisation'. The CPTPP is another concrete manifestation of the determination of other trading partners to pursue further trade liberalisation in a WTO-compatible fashion. Still, the EU and China are in a separate league: they are, apart from the US, the only two 'trade giants' and other supportive trading partners rightly expect that the EU and China assume their responsibility. An FTA between the EU and China, especially a 'deep and comprehensive' one, can be understood as a firm signal of a determined pursuit of freer trade and investment.

These five, if not six, rationales for an FTA with China add up to a formidable set of reasons justifying an exploratory study. This study mainly focuses on the 'how' of the FTA (Part II), after discussing some contextual aspects and the simulated economic *impacts* (Part III). The study does not go into the rationale in great detail, except where indispensable for a better understanding of such an FTA itself.

2. China and the EU in a rapidly changing world economy

Before delving deep into the substance of a possible FTA between China and the EU, it is crucial to appreciate the global economic context in which China and the EU operate, the trade strategies they have followed and the relationship between modern trade policy and the empirical relevance of global value chains for European and Chinese business. Each one of these subjects deserves a book-length manuscript, but for our present purposes that is not necessary. Chapters 2, 3 and 4 only provide the very basics of these aspects, enough to contextualise the EU-China FTA, as a background for analysing the possible substance of an FTA and the empirical simulation of its economic impact, insofar as such modelling can help us.

Chapter 2 deals with three aspects of the global economic context in which such an FTA would have to be understood. Section 2.1 provides some empirical reflections on the relative importance (weight) of China and the EU in future world trade. Section 2.2 discusses the relevance of domestic reforms in the EU and in China for the performance of the economy ('competitiveness') and hence, for the prospects of opening up successfully in the case of China. It is critical that Chinese reforms are implemented effectively and with a minimum speed for an ambitious and comprehensive FTA with the EU to be possible and successful. Nevertheless, such reforms are of course primarily in the Chinese public interest, as indeed reflected in the notable Third Plenum Decisions in 2013. Section 2.3 gives a summary account of China and the EU's trade strategies, as a basis to understand the realistic options for both trade and investment partners, including a rich and deep FTA with each other.

2.1 Chinese weight as an EU trade partner: Anticipate 2030

Before FTAs have an effective impact on market players, a lot of time will pass. Beginning with 'scoping' before negotiations, the negotiations themselves (easily lasting three to five years), the legal scrubbing and ratification process and the entry into force may well add up to a decade or more. Even then, sensitive sectors or other issues may only gradually be liberalised. Therefore, the relevant period for an EU-China FTA, if initiated soon, would be the years up to 2030. In this forward-looking perspective, China is likely to become even more important in world trade. Compared with 2012, Figure 2.1 shows the weight of non-EU trade partners in world trade as expected by 2030 (so, the EU itself is left out). We do not notice any particular shifts, except in the cases of China and the US. While in the top pie chart (2012) the US is the most important trade partner together with China, the expectation for 2030 puts the latter in first place (16%), while the US share is expected to be reduced by two percentage points (to 12%) (Figure 2.2). In other words, by 2030 China will clearly be the EU's largest trading partner.

Figure 2.1 The global economy in 2012

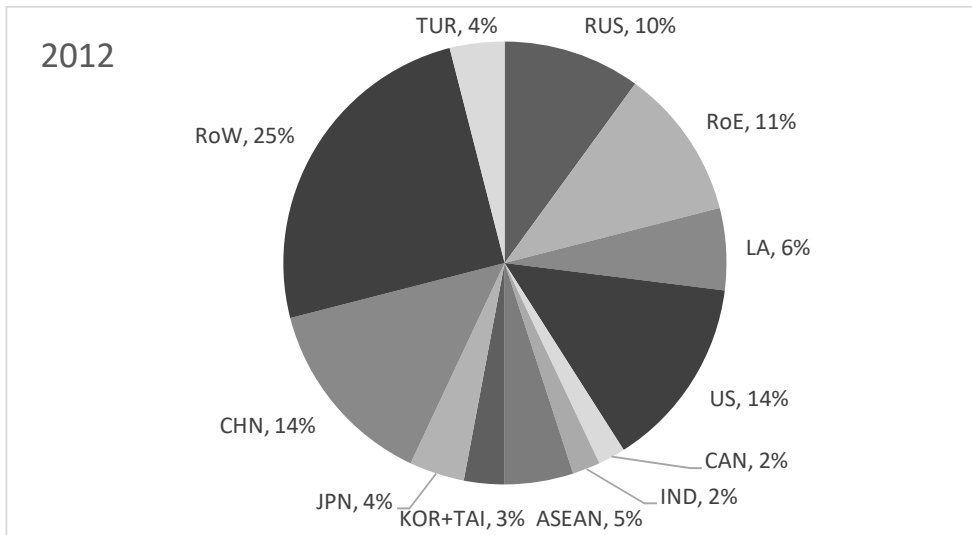
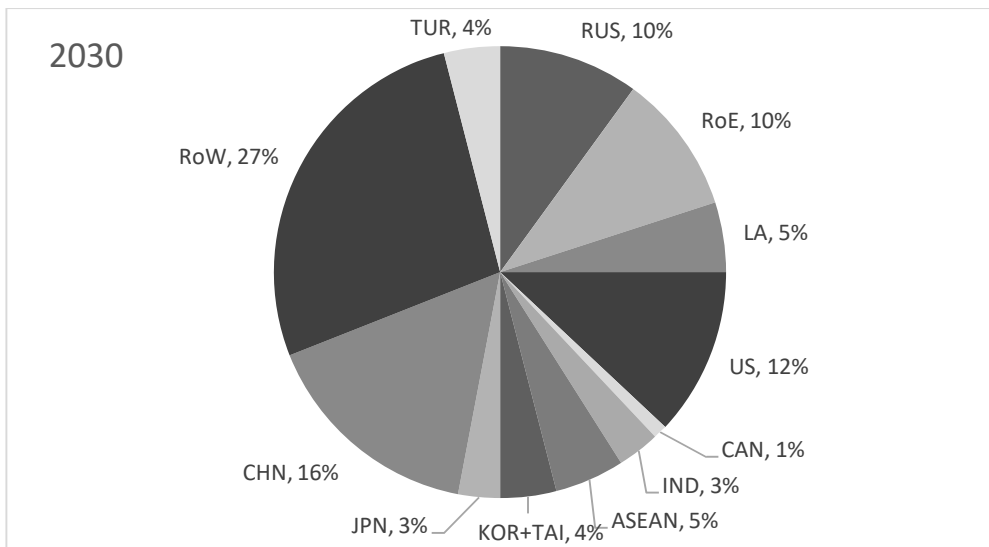


Figure 2.2 The global economy in 2030: Trends and strategies for Europe



Source: Authors' own elaboration using Gros and Alcidi (2013).

It has also often been suggested that the EU should focus more on the BRICs and that this ought to be reflected in EU trade policy. Yet, among the BRICs, China's trade is in a class of its own (see Table 2.1). Russia is a good second but its imports from the EU are entirely driven by consumption (that is, no intermediates); hence, the growth 'multiplier' calculated in 2012 (already lower than for China) is very unlikely to be realised or even to get close. Brazil and India import far less than the other two BRICs and trade now seems to stagnate. Also on this count, a focus on China, even in the form of an FTA, appears sensible.

Table 2.1 Major potential FTA partners, TTIP versus the BRICs

Country	EU trade by partner, 2012 (€ billion) (imports from the EU in parenthesis)	GDP growth to 2030, x-fold*	MFN tariffs**
US	498 (292)	1.35	2.1
BRICs	924 (346)	3.75	n.a.
China	434 (144)	4.5	8.2***
Russia	337 (123)	3.29	9.5
Brazil	77 (40)	1.7	10.2
India	76 (39)	3.73	7.2

* Based on current trade volume (European Commission, DG Trade) and with growth forecasts of the MaGE model.

** MFN = Most favoured nation. MFN applied 2010 based on the trade-weighted average. Higher tariffs indicate a larger potential for reduction. Sources: IMF, WTO and MaGE estimations.

*** MFN on industrial goods.

Source: Authors' elaboration based on Gros and Alcidi (2013).

2.2 Competitiveness and reforms in the EU and China¹⁹

Reform at home means different things to China and the EU, as their predicaments radically differ. The EU is mainly interested in engaging in structural reforms to limit the over-indebtedness and fiscal unsustainability of EU member states, render labour markets more flexible (without losing social basics, so typical for Europe) and make services markets more efficient (helped by a further intra-EU opening up of the single services market). Adding to these are its interests in reducing the role of government where no obvious case can be found (hence, some privatisations in Greece, for example) and pursuing upskilling and intrusive education policies in EU countries that are far below the EU average in high-skilled and medium-skilled intensive output.

In China, the reform process means something far more radical as the starting point is so different. China has had almost 35 years of high growth based on gradually allowing in new private firms, while leaving the SOEs more or less untouched, until the country began to prepare for WTO membership. In the late 1990s, SOEs began to be disciplined by drastic measures, such as the end of the SOE-based social security, sickness insurance and basic education for their workers, and massive lay-offs.²⁰ When entering the WTO (in 2001), the economy opened up considerably in goods markets though barely in services. Recently, China's model – of heavily investing in large-scale industries (in particular by SOEs, barely constrained by financing issues) and massively relying on cheap labour coming in from the central and Western countryside (with few rights, and without full, urban *hukou* privileges as for local citizens in Eastern cities) to

¹⁹ Principal sources: (i) Chi Fulin et al. (2015), (ii) OECD (2015) and (iii) the European Chamber of Commerce in China (2015) (p. 430).

²⁰ The numbers are unheard of, a consequence of the transition towards a more market-based economy. Suggestions are that some 40 million SOE workers lost their jobs and often had to move elsewhere. The size of China renders 40 million a smaller share than in most countries; nevertheless, the mere scale of this imposed adjustment has been enormous. See also chapter 14.

many free export zones or elsewhere, with phenomenal growth in trade and output – has been rapidly running out of steam.

Thus, China became the world's factory where the GVCs (global value chains) often ended for purposes of final assembly, and this worked well for a while. Once the labour inflow reduced (due to ageing and local development) and wages started to rise structurally, the severe limits of this system became apparent. Now China is saddled with enormous overcapacity in many sectors and says it wants to cut seriously; however, mixed signals are heard and observed. In October 2013, the State Council issued guidelines on reducing excess capacity in steel, cement, aluminium, flat glass and shipbuilding, but when the authors were in Beijing in December 2015, Mr Li once again promised to cut overcapacity. It is critical for China to render this promise credible, but it is also relevant for the EU as most of these are typically sectors where (anti-)dumping can be expected and has occurred. For most of the overcapacity SOEs are involved and many workers will have to be laid off, not to speak of writing off capital and equipment. This would seem to be the principal reason why overcapacity is not reduced as quickly as possible. The massive lay-offs of the late 1990s cannot be repeated. Still, there are two reasons why the overcapacity issue might, socially, not be as dramatic in the medium run as one might think. First, there are good possibilities for workers to move into the fast-growing services sectors, in some cases with retraining and up-skilling. Second, there may well be possibilities for labour to be reallocated to other manufacturing sectors, because during the last few years, the intra-China west-east labour flows have been steadily shrinking at the rate of some 3 million workers per year.

Compared with the last decades, China wants to boost services and middle-class spending. Rather than pure assembly, it wants to move up the value chains to higher value added in the products that it exports. This creates a direct link with boosting services, as higher value added is usually connected with high-quality services. In turn, that almost certainly requires better performing services markets, less restrictive service regulations and opening up to world competitors in domestic services markets. Central and local governments have announced that labour from the countryside will also receive *hukou* privileges and allow farmers to become citizens of cities with all the (health, social and educational) rights. Reforms aim at transforming the SOEs more convincingly into normal enterprises without special access and privileges in financing, but the Third Plenum also underscored that SOEs are vital to China's economic development and will have to be protected! Foreign and local observers applauded the Third Plenum intentions but often concur in that factual reform activities are scattered and irregular, not yet making a genuine reform path towards the avowed socialist market economy.²¹

²¹ See for example, the Annual Position Paper 2015/2016 of the European Chamber of Commerce in China (2015); see also the 2014 American Business in China White Paper by the AmCham China (2014); and also the US-China investment climate statement for 2015 by the US Department of State (2015). A revised programme of reforms related to commitments to economic openness and the establishment of a level-playing field is found in State Council Document no. 5 of January 2017. The European

The question is whether an FTA with China can fruitfully interact with the domestic reforms. In what areas are the Chinese reforms going to liberalise (e.g. services?) or discipline SOEs, and will this make the FTA easier to negotiate and also 'deeper' in terms of commitments? Conversely, can such an FTA boost the internal reform process and induce commitments to effectively implement these reforms, as Chinese authorities suggest? The FTA could, in their view, work as a credible form of external pressure while coming from a cooperative partner in an agreed WTO-based bilateral setting.

2.3 Comparing China and the EU's trade strategies: Multilateral, plurilateral and bilateral

The EU and China's trade strategies have several aspects in common. Both are WTO members. Both have concluded a series of FTAs. Both have also joined international organisations, which are underpinning a lot of the indispensable regulatory cooperation or convergence, characterising modern trade policies. One can think of, e.g. the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC, for global technical standards) or (for the purposes of SPS regulatory cooperation) the Codex Alimentarius and the World Organisation for Animal Health (OIE) as well as others. Both have actively supported interregional efforts, based on notions of a further opening of markets worldwide, such as (for the EU) the OECD and (for China) APEC. China and the EU member states (and since the Lisbon Treaty, also the EU as such) have been very active in concluding investment protection treaties (BITs), which show increasing signs of convergence. For China as a middle-income country emerging only recently from the status of a developing country, this is undoubtedly a remarkable record. After all, the EU and many member states are founding members of the GATT, have always felt a global responsibility to assume leadership, with the 'willing and able', to strengthen the world trade system and have been developed countries for a long time. This might also explain why China has some difficulties with joining the WTO plurilaterals, seeking to write WTO-plus rules in a range of sensitive areas. Catching up to commitments that go beyond those of the Uruguay Round is quite demanding for many non-OECD countries, including China. Nevertheless, China is also moving in these areas. More generally, the flurry of FTAs China has concluded, the stimulus from APEC and the transformation of its economic interests after decades of rapid economic development amount to powerful signals that China today and in the future is a very different and more ambitious partner than in the recent past. These considerations underlie the robust argument why it makes sense to pursue an ambitious and 'deep' partnership between the EU and China.

China established credibility with its joining the WTO in 2001, implementing significant reforms and opening up, especially in goods markets. In becoming a WTO member, it also accepted a 'built-in' agenda of further reforms linked to trade initiatives

Chamber's careful and detailed comments as well as numerous recommendations can be found in its Position Paper 2017/18. Similar to 2015, the key problem seems to be implementation (see www.europeanchamber.com.cn).

(e.g. on government procurement). For ten more years there was annual WTO reporting on the follow-up of a range of issues connected to WTO membership, keeping China on the promised route. Still, China has not fully lived up to its responsibilities (as the EU and others see it). As the biggest trader in the world (only the EU as a whole is larger), one should expect a degree of leadership in undertaking initiatives in the Doha Round or actively supporting a brokerage role in order to improve the multilateral trade environment. Instead, a passive attitude was observed in Doha and, in particular, China did little to persuade difficult BRICs, such as India and Brazil, to make reasonable concessions or avoid free-riding.

To the disappointment of the EU, this has led to a stalemate in the WTO, with the modest exception of trade facilitation (admittedly important for many APEC countries, including China). The way to move on has proven to be a renewed emphasis on plurilaterals, i.e. the GPA on public procurement (will China join, as promised? So far, six packages have not led to a breakthrough – see chapter 12); the ITA 2 (on new ICT goods tariff-free, with China finally yielding after a deal with the US in 2014 and joining in 2015); the option of a WTO plurilateral on environmental goods (China is not yet in, but might try) and TiSA, the plurilateral on freer trade in services, with a hybrid list (negative and positive), but so far, little initiative from China to join, other than through trivial offers.

One might say that the last hurdle is not surprising if one realises the many restrictions China maintains in services and related investment. Nonetheless, a lack of commitment in services is puzzling in the light of its own clear reform strategy (from the very top) to liberalise services both domestically and towards foreign business. The obvious explanation is resistance from SOEs, preponderant in several services markets, and with enormous political and lobbying power.

It is at least somewhat more probable that *bilateral* strategies are regarded by China as a safer mode to open up, in terms of partnerships (which China prefers) and with selective and gradual schedules. As shown in Table 2.2, China has been very active in concluding or negotiating FTAs, usually with East Asian or South Asian countries, as well as a few other ones (recently including Switzerland, Norway and Iceland as European Free Trade Association (EFTA) countries).

Among the deals in force, however, only the FTAs with Korea and Australia are 'less shallow' (but not so deep) while all the other ones mainly seek tariff-free goods trade. As one observes from a few cases in Table 2.2, China goes for upgrading (deepening) existing FTAs over time, albeit cautiously. In particular, the FTA with Korea and possibly soon the trilateral with Korea and Japan are interesting, as they are quintessential for China's trade interests. The staged FTA between China and Australia can also be read as a prudent exercise in upgrading. These FTAs or negotiations can be studied as templates or illustrations of what China might be willing to concede (or indeed ask when conceding) and may be useful for the EU.

Table 2.2 China's FTA activism: Concluded and negotiated FTAs

China's FTAs	China-ASEAN FTA
	China-Pakistan FTA
	China-Chile FTA
	China-New Zealand FTA
	China-Singapore FTA
	China-Peru FTA
	Mainland and Hong Kong Closer Economic and Partnership Agreement
	Mainland and Macau Closer Economic and Partnership Agreement
	China-Costa Rica FTA
	China-Iceland FTA
	China-Switzerland FTA
	China-Korea FTA
	China-Australia FTA
	FTAs under negotiation
China-Norway FTA	
China-Japan- Korea FTA	
RCEP	
China-ASEAN FTA upgrade negotiations	
China-Sri Lanka FTA	
China-Maldives FTA	
Preferential trade agreement	Asia-Pacific Trade Agreement

Note: China also maintains a special agreement with Chinese Taipei, which has led to rapid and deep liberalisation, but its formal FTA status is in doubt.

Source: Authors.

The EU's trade strategy since 2006²² has been clear: it is keen to tap into East Asia essentially for reasons of the growth-enhancing effects of connecting with dynamic markets. FTAs have been concluded with South Korea (in force), Singapore, Vietnam and Japan (ratification pending); negotiations are underway with Thailand, Malaysia, Indonesia and the Philippines. In this respect, also the recent EU decisions to negotiate FTAs with New Zealand and Australia are crucial given the emergence of CPTPP, as those two countries already have an FTA with China. This strategy has been highlighted once again, and this time with more clarity and specificity, in the European

²² See European Commission, "Global Europe, competing in the world: A contribution to the EU's Growth and Jobs Strategy", Brussels, 2006; see also European Commission, "Trade, Growth and World Affairs: Trade Policy as a core component of the EU's 2020 Strategy", COM(2010) 612, Brussels, 2010.

Commission's recent "Trade for all" Communication (2015).²³ The latter speaks of a "strategic engagement" in Asia and the Pacific and clarifies the current trade policy predicament with China. It argues (rightly) that the ongoing CAI²⁴ negotiations will support China's reforms as well as the mutual investment strategies, e.g. One Belt, One Road (nowadays BRI). It continues: "China has suggested further deepening the relationship through an FTA, but the EU will only be ready to engage in such a process once the right conditions are met, as expressed in the EU-China 2020 strategic agenda for cooperation." And "[t]hose conditions are also related to the successful implementation of a range of domestic economic reforms in China, since the purpose of an FTA would necessarily be to establish a level playing field".

Finally, China's thinking about the TPP and the political/geostrategic meaning of FTAs in some cases has to be developed (e.g. Song & Wen, 2012).²⁵ The Chinese leadership does not hide a certain interest in joining the transpacific deal even if it realises that the level of ambition put forward by the agreement is somewhat too high for the current situation. It has also been argued that the interest in joining the TPP as well as the Chinese president's call for an EU-China FTA belong to a broader strategy that seeks to avoid the Chinese economy being isolated, even more so now that the TTIP is also quite advanced (although placed on hold in early 2018 and far from being concluded even before Trump). The EU takes the Chinese FTA request seriously, as affirmed by Commissioner Malmström (2016) during a recent speech, but at the same time the Commission expects that two main prerequisites will be met before starting any future negotiations. First, the ongoing negotiations on bilateral investments must be successfully concluded; second, and most importantly, China must significantly reform its internal system by letting markets drive the outcomes of reform while reducing the role of the state. The reason why the promised reforms are a fundamental step before starting FTA talks is the high degree of ambition of EU FTAs. The scope and depth of an FTA with China in terms of hard and enforceable commitments are only possible and credible when, in China, profound and wide-ranging reforms are effectively implemented. This will have far-reaching effects on China's own government and governance, as many indications in this study point to, and imply sweeping removal of bans, restrictions, and costly and pointless 'competition' between far too many overlapping public agencies/ministries, at central and provincial/local levels. In the process, the SOE problem with all its special dimensions, including the direct line to the Party in China, will have to be tackled convincingly. Altogether, markets and the business environment will surely change significantly. Early in this process, reforming and curtailing the supply in selected industries and thereby reducing the massive overcapacity are steps needed, as Commissioner Malmström noted, first of all for the Chinese economy and by implication for its commercial partners.

²³ See European Commission, "Trade for All: Towards a more responsible trade and Investment Policy", Luxembourg: Publications Office of the European Union, 2015.

²⁴ For more on the CAI (a broader BIT with China), see chapter 15.

²⁵ See also Peterson Institute for International Economics (2016).

3. Bilateral economic relations: Trade and investments

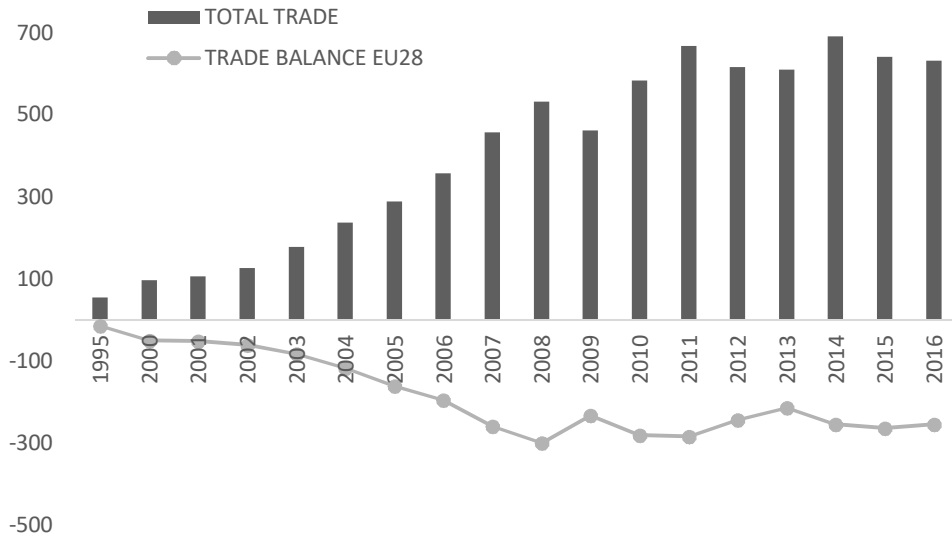
In recent decades, the economic relations between the EU and China have changed beyond recognition. The present chapter focuses on trends and the composition of bilateral trade and investment. China was the largest source of goods imports (€345 billion) and the second-largest destination for goods exports (€170 billion) in 2016 (European Commission, 2018). For services, in 2015 China (with €37 billion) was not an important destination for EU exports²⁶ (modes 1 and 2) whilst services imports from China (€6 billion) are relatively small. The huge difference in EU services exports between China on the one hand and Switzerland and the US on the other hand confirm a suspicion that China severely restricts services imports. In terms of the stocks of foreign direct investment (FDI), Chinese stocks in the EU (€35 billion) are the highest of Chinese bilateral stocks anywhere. In 2015, the EU's stock of FDI in China climbed to €168 billion, a significant amount but again it pales compared to e.g. EU FDI stock in the US (€2,650 billion) and in Switzerland (€825 billion). Such disparities fuel the suspicion that, also in FDI, China maintains an overly restrictive regime. If one also realises the profound interlinkages between European and Chinese business in GVCs, the flows of royalties and the near-explosion of Chinese tourism in Europe, the EU-China economic relationship is large, manifold and probably worth being developed as well as embedded in better structures.

Figure 3.1 reports the total trade flows (imports plus exports in goods) between the EU and China and the trade balance. Flows have steadily increased since 1995 with two setbacks in 2009 and in 2012–13. During the same period, the EU experienced an increasing deficit. Since 2009, the deficit in goods trade has more or less stabilised. It should be realised that Figure 3.1 depicts the conventional deficit in goods trade. This is a gross figure, with considerable double-counting with respect to imported intermediates (into China, and then exported when incorporated into the final export good). It is later shown that the deficit in goods trade, when double-counting is removed (also indirectly through other inputs, e.g. services) is substantially lower (though still large).

In Figure 3.2, we can see the evolution of the sectoral composition of the trade flows. There is a clear predominance of machinery and transport equipment followed by (other) manufactured goods and articles, which together account for 80% of trade flows. Among the remaining sectors, it is worth mentioning chemicals.

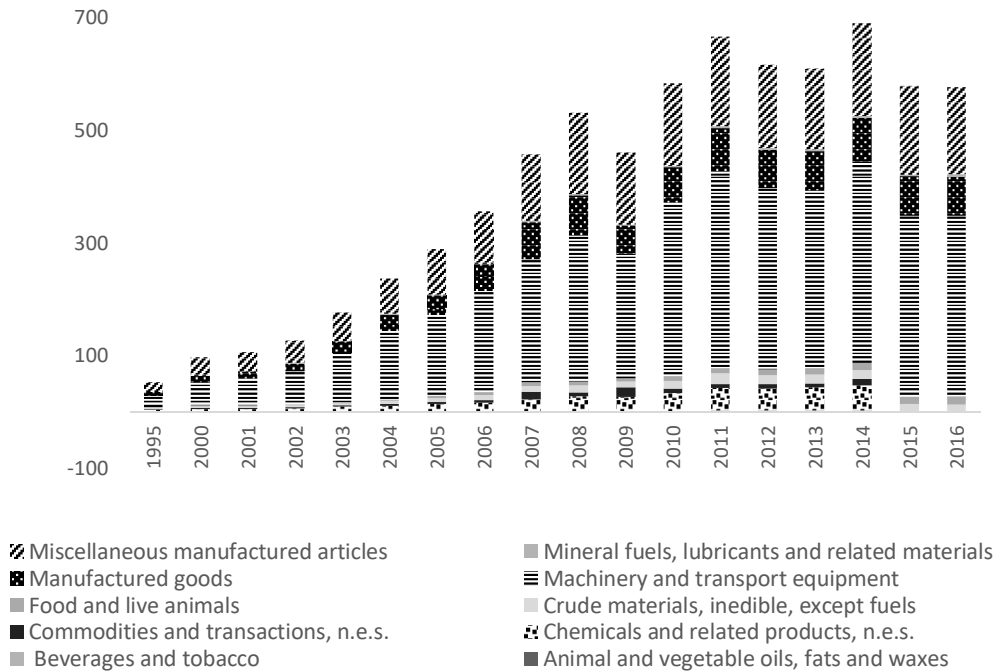
²⁶ For comparison, in 2015, the EU exported €219 billion in services to the US and €119 billion to Switzerland.

Figure 3.1 Total EU-28 trade in goods with China (\$ billion)



Source: Authors' own calculations using UNCTAD (2018).

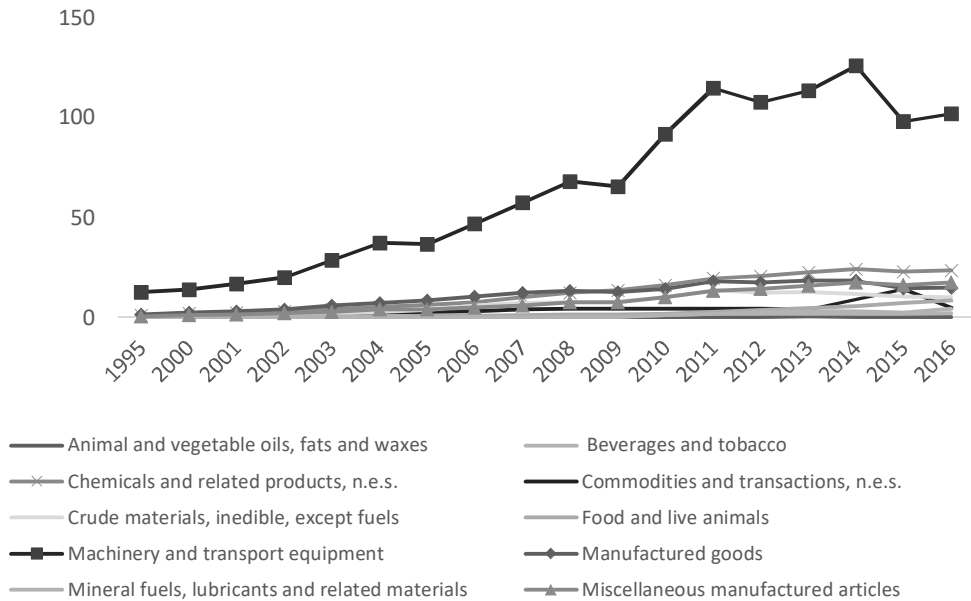
Figure 3.2 Total trade for sectors, EU-China (\$ billion)



Source: Authors' own calculations using UNCTAD (2018).

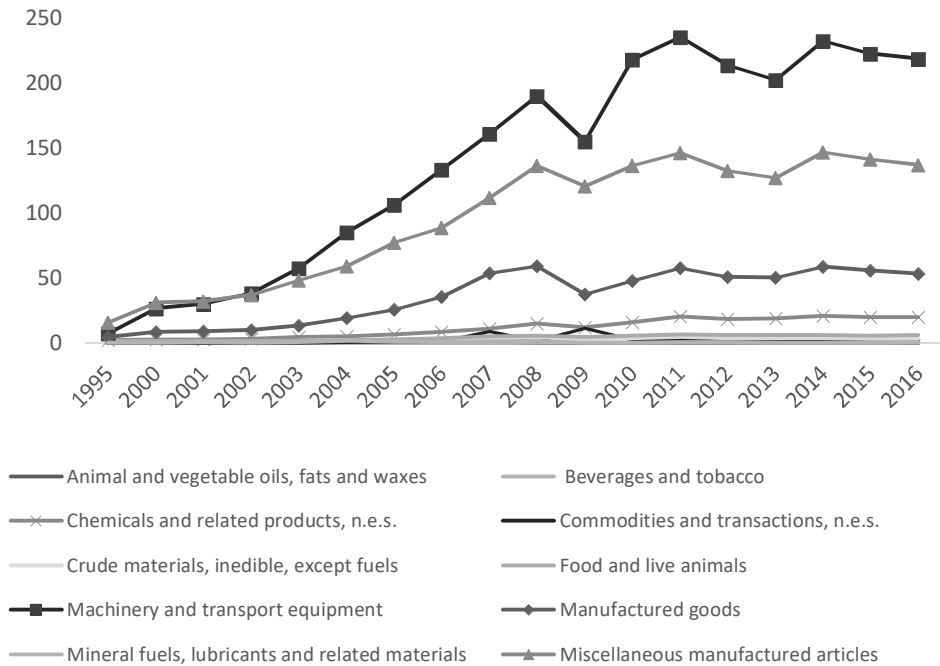
Figures 3.3 and 3.4 show the trade growth of each sector over time. On the export side, only machinery shows a sustained growth rate, rising from \$12 billion in 1995 to no less than \$126 billion in 2014, with a probably temporary dip in 2015. The other sectors, notably chemicals, also show a stable, positive growth rate but less high than that of machinery and transport equipment. In contrast, imports from China have grown across sectors in a more balanced way, especially in sectors like (other) manufactured goods and articles, showing the strong import activities of the EU in those sectors.

Figure 3.3 EU-28 goods exports to China, by sector (\$ billion)



Source: Authors' own calculations using UNCTAD (2018).

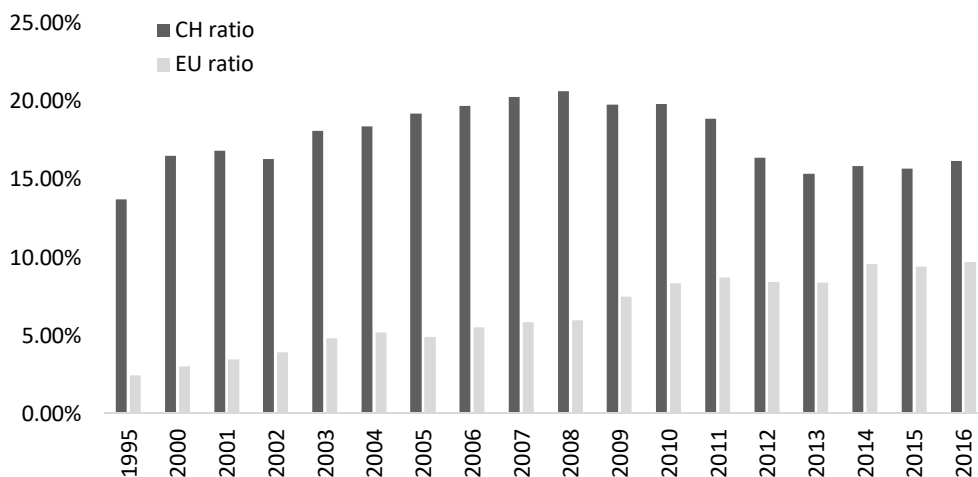
Figure 3.4 EU-28 goods imports from China, by sector (\$ billion)



Source: Authors' own calculations using UNCTAD (2018).

Figures 3.5 and 3.6 provide measures of 'relative trade dependence' between the EU and China, expressed as shares of overall EU exports or imports. Figure 3.5 shows an increase of the Chinese share of EU goods exports from a little over 2% in 1995 to more than 8% in 2016, a strong growth but from a low base. China, meanwhile, strongly relies on the EU as a target market for its goods exports, with an average share of its overall goods exports of 15%. However, the diagram shows a drop between 2012 and 2014 of three percentage points, and meanwhile restoring slowly up to 2016 inclusive.

Figure 3.5 EU and China: Bilateral trade dependence in goods exports

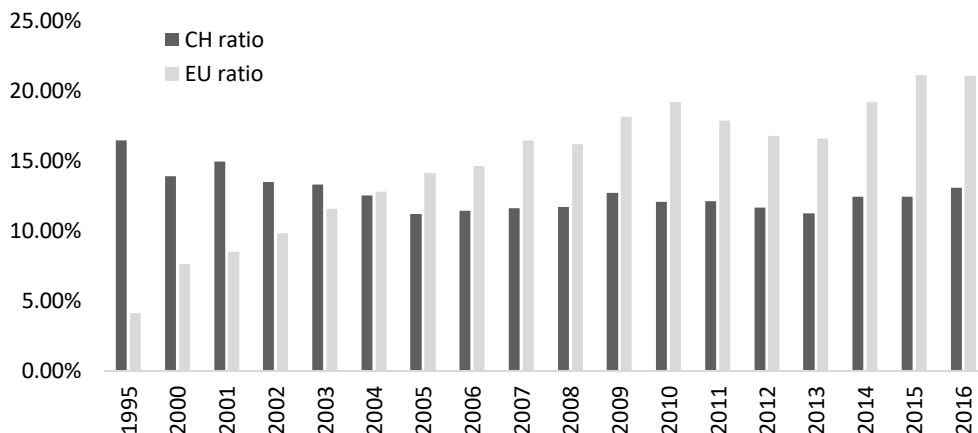


Note: The ratios have defined the EU (Chinese) goods exports to China (EU) as a share of total goods exports by the EU (China). Only extra-EU exports are considered.

Source: Authors' own calculations using UNCTAD (2018).

Trade dependence on the import side shows a completely different trend. China was good for almost 20 % of EU goods imports in 2016, up from 3.5% in 1995. Chinese goods imports from the EU as a share of total Chinese goods imports slowly decreased, from 16% in 1995 and stabilising at around 11% in 2005, until 2014 when it started rising again to 12.5% in 2016, the somewhat lower level presumably owing to the strong rise of intermediate goods imports by China from East Asia.

Figure 3.6 EU and China: Bilateral trade dependence in goods imports

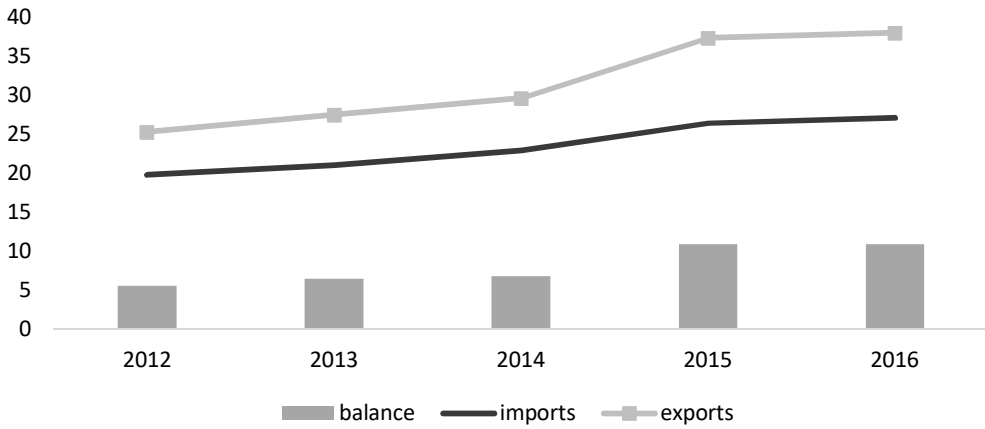


Note: The ratios have defined the EU (Chinese) imports from China (EU) with respect to total goods imports by the EU (China). Only extra-EU imports are considered.

Source: Authors' own calculations using UNCTAD (2018).

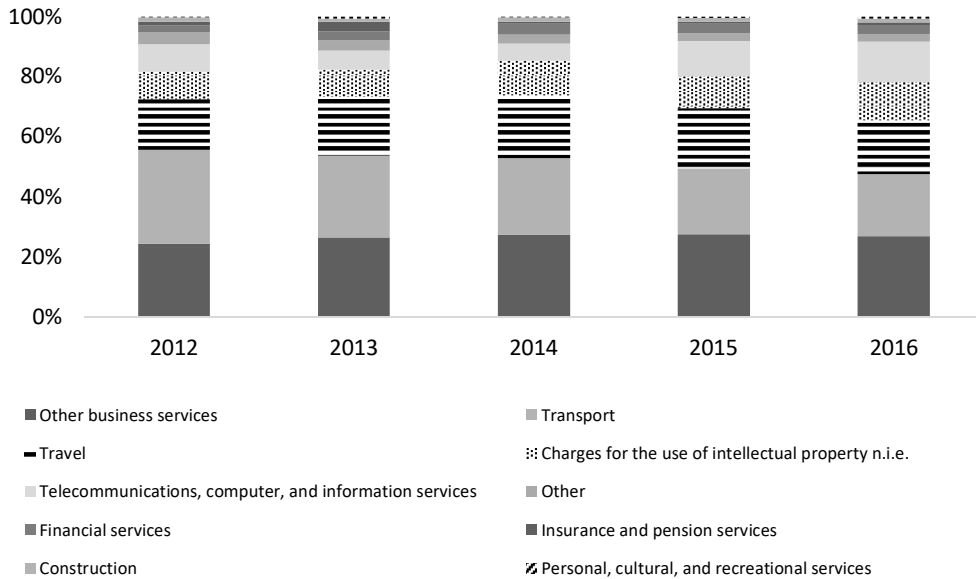
In cross-border services (modes 1 and 2 of the GATS), trade flows are far smaller than in goods. The flows have increased over time and the EU has shown a growing surplus, to some €6 billion in 2016 (Figure 3.7). There are two prevalent sectors in EU-China trade in services: transport and business services (Figure 3.8).²⁷

Figure 3.7 Imports from and exports to China of services and the EU trade balance (€ bn)



Source: Authors' own elaboration using DG Trade (2018).

Figure 3.8 EU exports to China of services, by sector (%)



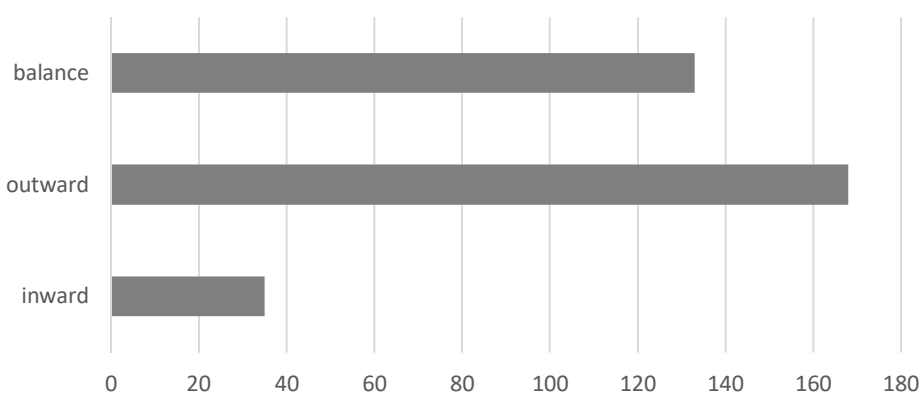
Source: Authors' own elaboration using DG Trade (2018).

²⁷ The considerable discrepancy with EU data might have complex explanations, one probably being that FDI flows are typically taken from the Central Bank and therefore do not incorporate reinvested earnings (needed for good stock estimates).

The EU trade balance with China is negative but the trade volumes have continually increased except for the years 2012 and 2013. The rise of the trade deficit, as explained in the following chapter, can suffer from double-counting given the strong interdependence between the two economies, especially in terms of trade in intermediates. Machinery and chemicals represent the main sectors, particularly for Chinese exports. On trade interdependence, it is worth mentioning that China strongly relies on the EU as a destination market, while the EU depends on China mainly for mass consumer goods and imports of intermediates.

Figure 3.9 represents the stocks of EU FDI in China in 2015. In particular, we notice a positive balance of more than €100 billion.

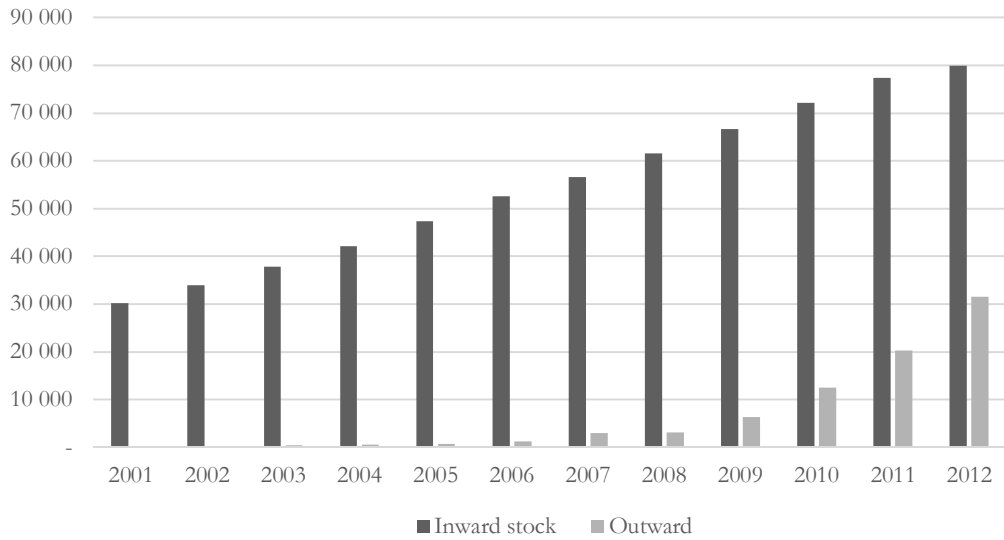
Figure 3.9 EU FDI stocks towards China (€ billion), 2015



Source: Authors' own elaboration using DG Trade (2018).

In Figure 3.10, the trend in stocks of FDI (both inward and outward) is depicted from the Chinese perspective (that is, based on Chinese data) for a longer period, but only until 2012 inclusive. Bilateral stocks have both strongly increased over time; however, the gap between European FDI towards China and Chinese FDI towards the EU remains quite high. The EU is the largest exporter of FDI to the Chinese economy in 2012 with \$ 80 billion. In the same year, Chinese FDI flowing to the EU was slightly above \$30 billion. In terms of share, Chinese inward FDI has been relatively stable although a greater engagement in the global value chain would have suggested an opposite result. Indeed, as reported by the UNCTAD (2013), a positive correlation between engagement in GVCs and changes in inward stocks of FDI would be expected.

Figure 3.10 Chinese inward and outward FDI stocks from/to the EU (\$ million)



Source: Authors' own elaboration using UNCTAD (2016).

4. Global value chains: Significance for the EU and China

Trade in goods and services today is much more sophisticated than it was several decades ago. Rather than trading only finished products, manufacturing firms often engage only in segments of the value chain, targeting specific products and hence preferring in-depth specialisation. Similarly, in services, new interlinkages with goods have emerged, implying that exports of goods in fact incorporate a rising share of services input. Developments in ICT and reductions of travel and freight transport costs allow less vertically integrated firms to take advantage of the highly differentiated comparative advantages and specialisations worldwide.

This phenomenon is also relevant for trade relations between the EU and China, where the latter is often considered an ‘assembly’ factory, engaged in low-skilled activities and very competitive in the lower parts of the value chain. The EU, by contrast, is increasingly seen as a service economy specialised in high technology and medium and high-skilled intensive goods and services, withdrawing from low-skilled intensive goods output or labour-intensive goods more generally. This short chapter reports on the still relatively limited knowledge about value chains between the EU and China. Nevertheless, the recent statistical and economic analysis on such value chains and their dynamics is revealing. It clearly shows that value chains are critical to the rapid growth of EU-China trade in goods and services and even more so of jobs connected to such activities. It appears that the EU and China are truly complementary in specialisation and that a ‘deep’ FTA is likely to be a stimulus in yet further deepening this complementarity, especially via services.

The degree of internationalisation between the two economies is not yet as deep as one could imagine; indeed, the process seems to have just started, with only 8% of global output dependent on imported intermediates and the remaining 92% sourced domestically (European Commission, 2014). On the EU side, 87% of EU value added is of domestic origin.

Understanding the functioning of GVCs remains crucial when analysing the future trade relations between the two economies. In order to do so, it is convenient to refer to a recent study released by the European Commission.²⁸ The final product can be divided into three components according to the value added generated by a single economy: the direct domestic value added, which includes the direct remuneration of the domestic factors engaged in the production, domestic intermediates that incorporate the value of the intermediate product bought from a domestic firm and finally, the imported intermediates that represent those purchased from foreign companies.

World trade statistics are normally based on customs forms and invoices of goods passing frontiers. The trade flows so reported look only at goods classified on such forms and do not take into account which intermediate part of that good is first

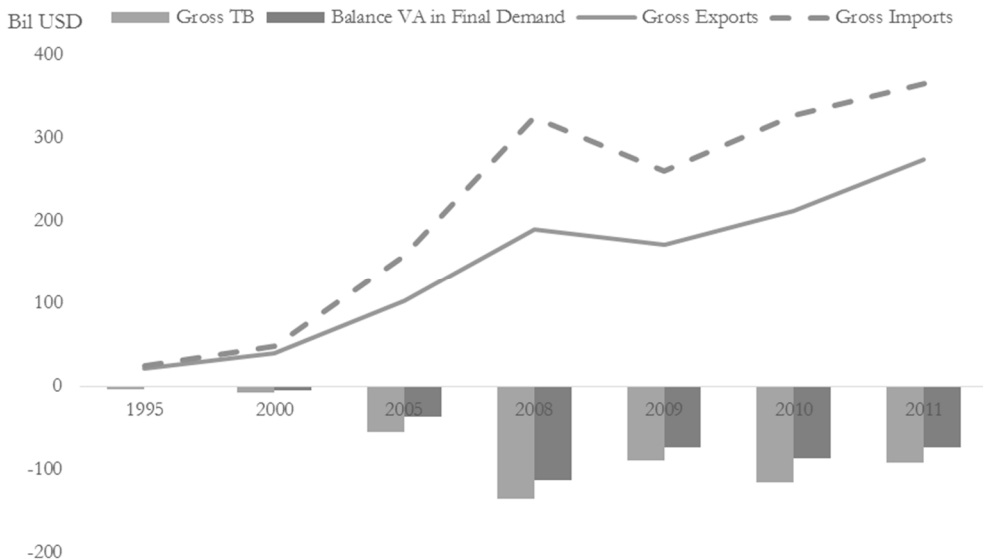
²⁸ See European Commission, “China-EU global value chains: Who creates value, how and where? Growing linkages and opportunities”, Brussels, 2014 (http://trade.ec.europa.eu/doclib/docs/2014/january/tradoc_152123.pdf); the study is authored by the University of Sussex, ECORYS and CASE.

imported from another country. In practical terms, this means that a final good imported by the EU from China can be assembled there, while it contains major imported inputs from outside. Therefore, the ordinary trade statistics do not express the value added in China but merely the face value of the invoice price. Thus, in statistical terms, traditional gross trade statistics imply double-counting problems, which are especially serious with respect to an assembly economy like China's. The double-counting has an interesting implication for the trade deficit with China: once an imported input is deducted (a complicated exercise for many thousands of types of goods and services), the EU trade deficit with China is lower, and in some sectors much lower.

Thanks to recent (WTO and OECD) statistics collected in terms of value added, it is possible to understand the position of each country in the global value chain and compare the trade deficits according to the two methodologies.

Figure 4.1 shows the difference between the trade balance calculated with gross traditional statistics, and the balance of trade in value added: what the picture clearly shows is that, in terms of value added, the deficit is systematically smaller than the traditional trade balance. However, the value-added approach does not invert the sign of the balance, but merely amends it a bit. The lower deficit in value-added terms implies that the EU's economic interest in China's exports to the EU is greater than one otherwise would realise.

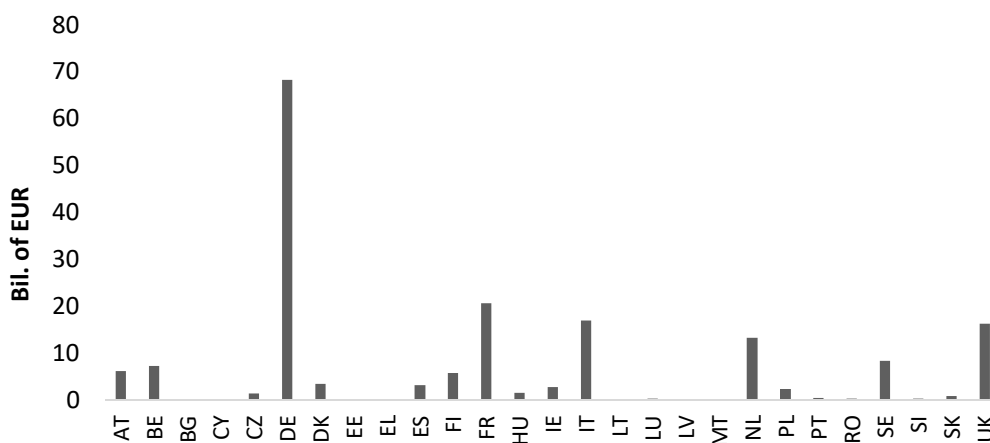
Figure 4.1 EU China trade balance (gross flows and value added)



Source: Authors' own elaboration using Trade in Value Added (TiVA) Statistics, OECD Database (2015).

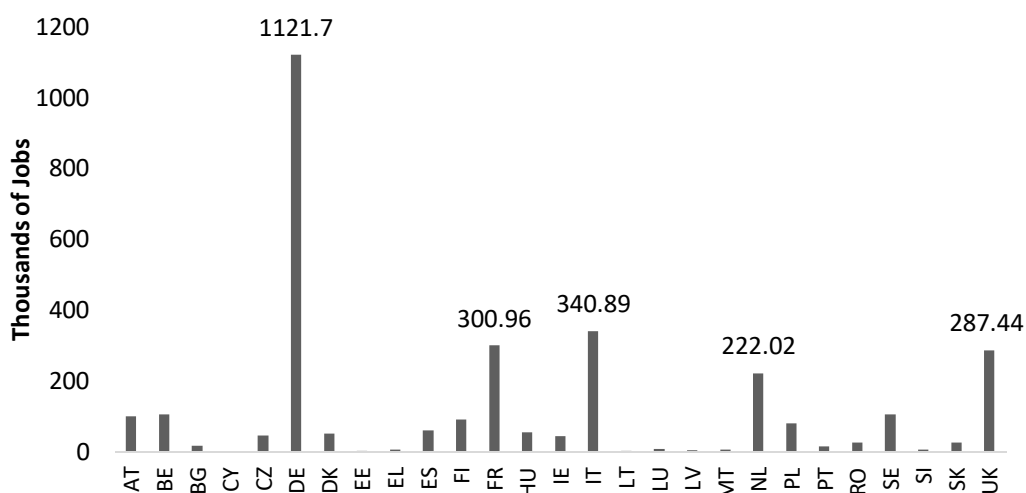
Moreover, given recent statistical work by the European Commission,²⁹ one can have a clear understanding of how many jobs are supported by trade activities with China. This is of course true for EU jobs connected to EU exports, but it is even possible for Chinese jobs dependent on EU exports, as well as EU jobs connected to EU imports from China. Figure 4.2 represents the *value added* (linked directly with employment) created in Europe by each member state's exports to China, while Figure 4.3 shows the number of *jobs* created in each EU member state thanks to the goods and services exported to China.

Figure 4.2 EU value added in the exports of each member state to China (€ billion), 2011



Source: Authors' own elaboration using DG trade/Joint Research Centre Trade and Jobs (2015).

Figure 4.3 Number of EU jobs supported by member states' exports to China, 2011



Source: Authors' own elaboration using DG Trade/Joint Research Centre Trade and Jobs (2015).

²⁹ Conducted with the EU's Joint Research Centre.

What is surprising is that China's reliance on imported intermediates is not as large as one might have expected: it is not just an 'assembly' centre. But it has globalised between 1995 and 2009, as can be observed by the increase in imported intermediates from 9% to 12% of total output. While it is still specialised in low value-added activities, like pure assembly, it is relying more and more on domestic inputs and integrating different stages of the chain more than the past (Table 4.1). This coincides with the current Chinese strategy aiming at increasing the value added of this production and moving up in the value chain.

Table 4.1 Decomposition of total output by direct input (%)

	Domestic		Imported	
	Direct value added	Intermediates	Intermediates	
World	1995	53	41	6
	2009	50	42	8
EU	1995	53	39	8 (of which 5% is intra-EU)
	2009	51	38	10 (of which 6% is intra-EU)
China	1995	39	56	5
	2009	33	59	8

Source: European Commission (2014, p. 33).

Moreover, the EU globalised in the sense of an increase of imported intermediates from 6% (1995) to 9% (2009). What Figure 4.3 tells us is that nearly 3 million jobs in the EU directly depend on EU exports to China, with Germany alone having some 1.1 million. In European Commission (2014), one finds other striking results: another 1.1 million jobs in the EU depend on what China exports to the EU and some 5.5 million jobs in China depend on what the EU exports to China (a figure that is more widely known). If one calls such Chinese jobs 'GVC jobs', for simplicity, they have increased ten-fold over the period 1995–2009, while GVC jobs in the EU have doubled. These are striking figures about the interlinkages under (here, bilateral) globalisation. Stronger, EU GVC jobs linked to Chinese exports have grown twice as fast as what usually receives attention, namely, EU export jobs, and nearly nine times as fast as the total EU jobs in the same period!

Another important finding of bilateral value chain analysis is the contribution of incorporated services in goods or intermediates exported. For the three large sectors scrutinised in European Commission (2014) – namely, electrical and optical equipment, transport equipment and chemicals – the EU specialisation is mainly in the medium and high-skilled value-added services of the value chain. Thus, although direct EU services exports to China are relatively low and tend to be restricted anyway, incorporated services are critical to the EU's competitiveness vis-à-vis China. To exploit these capabilities in China, however, is far from easy (see also chapter 11), and EU companies have responded in ways that reduce the benefits of value chains. Such responses include relocation of R&D activities or other specialised investments and raising prices for Chinese firms.

PART II. DESIGN AND SUBSTANCE OF AN EU-CHINA FTA

5. What would an EU-China FTA look like?

Part II of this study deals with the ‘how’ of a possible EU-China FTA. Basic design issues are discussed in this chapter, whereas substantive questions are addressed in chapters 6–14, complemented by chapter 15 on the CAI (on investment). The CAI could also be imagined as being integrated into the FTA, although the events surrounding CETA and the inclination of member states to consider an FTA as a ‘mixed agreement’ as soon as there is anything related to investment in it (despite the CJEU ruling on the Singapore FTA) would render that probably imprudent.³⁰

When looking at the two prospective FTA partners’ bilateral and regional trade policies over the last 10 to 15 years or so, the contrast in their FTA strategies is clear: China so far has preferred shallow FTAs (and with very different types of partners, even including the Maldives) and the EU has followed an outspoken strategy of concluding ‘deep and comprehensive’ FTAs, with explicit preferences for East Asia, for instance.

This contrast in the *design* of FTAs as favoured by the two parties is a crucial issue that – in the event of the two parties beginning a ‘scoping’ exercise of what may be expected to be negotiable – has to be resolved first. In this short chapter, two aspects are addressed: (i) what a ‘deep’ versus a ‘shallow’ FTA is; and (ii) the broad economic considerations that play a leading role in opting for one or the other.

A comprehensive FTA is characterised by a broad scope of policy areas beyond pure tariff issues, areas recognised as trade-relevant (e.g. in the WTO or elsewhere like the OECD or APEC), whereas a shallow FTA focuses on tariffs, other duties (e.g. anti-dumping duties), tariff-rate quotas (TRQs) (often employed for agro-goods) and some customs questions. The policy areas beyond tariffs in a comprehensive FTA typically include a range of regulatory domains and this must mean that they are largely ‘domestic’ rather than purely ‘border’ questions. Including them in an FTA with hard obligations, rather than for mere ‘cooperation’ or ‘best endeavours’, is regarded as more intrusive, and hence, often more sensitive. However, one should not overplay this argument or political sentiment, because even the WTO has a number of agreements on these regulatory domains, such as services (GATS), trade-related investment measures (TRIMs), intellectual property rights (IPRs), SPS and technical barriers to trade (TBTs). Moreover, plurilateral WTO agreements (signed by those ‘willing and able’ but open for new members under WTO rules) complement the list in areas such as public

³⁰ See also Van der Loo (2017).

procurement, or deepen the above-mentioned WTO agreement by further-reaching commitments (e.g. services in TiSA).

A 'deep' FTA is characterised by the depth of commitments and enforceable obligations. When an FTA is 'deep and comprehensive', it refers therefore to hard, enforceable obligations of a WTO-plus (or 'WTO-plus-plus') nature in both regulatory and traditional areas of trade policy, and presumably with the common institutional structures (joint bodies or a hierarchy of committees) to monitor progress, address complaints, elaborate on technical issues or even deepen commitments further over time (a so-called 'living agreement'). Clearly, all this is rather different from the original idea of a free trade area. An early example of a deep and comprehensive FTA is NAFTA (in force since 1994), which covers many domains. Meanwhile, the ambition has shifted upwards a good deal more, as demonstrated by CETA (probably the most ambitious FTA outside the EEA, which is unique and irrelevant³¹ for 'normal' trade policy), TTIP (so far as one can tell at the moment) and TPP (now CPTPP). Therefore, to accept a deep and comprehensive FTA as the starting point of negotiations is no longer nearly as 'ambitious' as it was (say) two decades ago. But that is easily concluded for the EU. It is far more challenging for China, given its tradition of shallow and less comprehensive FTAs.

What matters nowadays is less what chapters or policy domains are included in an FTA but rather *how deep* the bilateral or regional commitments are in these areas. In other words, general calls to 'cooperate' or for 'best endeavours' in trying to enhance commitments in such regulatory policy domains often do not go beyond the WTO level of trade policy or might as well be pledged in (say) the OECD or APEC (as indeed this is done routinely). In terms of the 'depth' of commitments in an FTA, these best endeavour clauses, for example, should *not* count as adding value for market access or fostering trade and investment, until or unless they lead to hard commitments later on. Thus, in recent FTAs concluded by China (e.g. with Korea), endeavour clauses can be found with respect to several regulatory areas that China regards as a basis for future cooperation ('gradually'). But also on the EU side, it is clear that the Union's insistence on depth may not always be heeded by partners. The most advanced FTA outside Europe is CETA, yet its TBT chapter 4 is not nearly as committing as one would expect – this is due to Canada's profound market integration with the US (and Mexico) where for example, technical standardisation and reference to standards in technical regulation are conducted in very different ways from the EU. However, Art. 4 of chapter 4 (and the Protocol linked to it) on conformity assessment is ambitious and sets a new global benchmark.

Concretely, a rule of thumb for a deep and comprehensive FTA is the fulfilment of two requirements: i) a broad scope and ii) within the regulatory areas, a significant degree of commitment. The broad scope implies that, beyond tariffs (and related anti-dumping and TRQs), the following areas should be included: TBTs, SPS barriers and food/feed safety issues leading to obstacles, market access in services, public procurement, IPRs and geographical indications and investment (both access and

³¹ As the EEA is all about being a member of the EU internal market (except for agriculture and fisheries) without being a member of the EU. For extensive analysis, see Pelkmans & Boehler (2013).

protection), and competition policy (including state trading, which – in the case of China – implies the role of SOEs in markets). For investment, one might opt for a stand-alone investment protection agreement (as the CAI might be – see chapter 15) and make it more ambitious by including market access (as the CAI will have). Nevertheless, the inclusion of market access through investment is an obvious overlap with what a deep FTA is expected to be. Therefore, sequencing first a CAI and subsequently an FTA is determined not by design logic, but by the building of trust, the capacity of a country to assume deep obligations (which have considerable domestic consequences) at the present stage and problems of adjustment and resistance to reform. The depth of commitment in these areas is a very complicated question and one that is dealt with in the remainder of the study. The present study does not contain chapters on sustainable development, say for environment and labour, but these are indispensable in a fully-fledged FTA, according to EU standards. The highest standard set for these are found in CETA (and in the EU-Japan EPA), but it seems far-fetched to expect China to accept that degree of ambition.

The economic considerations favouring a deep FTA have not had much analytical attention in economics until recently. In CGE simulations (such as in our part III) and in econometric tests, there are suggestions that deeper FTAs generate greater (positive) economic effects than shallow FTAs. What makes countries hesitate (and China is no exception) is that the depth of commitments is feared to be inconsistent with the level of development, and hence the comparative advantages at the present stage. Such FTAs would be ‘unbalanced’ and mainly favour highly developed economies (such as the EU). Correct or not, this argument has to be regarded from two sides: given the EU’s high level of development, it is obvious that a pure tariff agreement is also biased. Indeed, insofar as the comparative advantages of a developed economy are found in high-tech or high-skilled intensive goods and in skills-intensive services, tariffs may be a trivial market access barrier compared with TBTs (resulting from differences in regulation or conformity assessment) or SPS barriers or other regulatory barriers (e.g. in the case of services).

This is also true for public procurement in sophisticated products or for instance, transport systems or complex infrastructure. A mere focus on tariffs would likely bias the prospective FTA in the other direction, failing largely or completely to address costly market access barriers for goods and services exported by developed countries. Moreover, if the emerging economies do not want to risk getting stuck in the ‘middle-income trap’ (and China is plainly doing everything to avoid that), they will have to upgrade goods and services nationally and in global exchange, often linked to investment too, and this strongly suggests forms of FTAs that are broad in scope and deep in commitments. Only such deep and comprehensive FTAs will induce the competitive exposure and opportunities required to produce and compete at the world level and raise productivity in the process, badly needed to underpin sustained high growth. It should thus be possible to find a compromise between the EU and China, in particular with a view to the medium and longer run. The recent conclusion of a fairly deep EU FTA with Vietnam points in the same direction.

There are also more rigorous economic arguments to do so. In an ambitious recent contribution by Dür, Baccini & Elsig (2014), a more precise and insightful identification

of the 'depth' of FTAs has been developed.³² The authors employ different econometric specifications in order to answer the question of whether FTAs actually do increase trade. They find – in more robust results than before – that deep FTAs increase trade considerably more than shallow ones. This is important because in previous empirical work FTAs were (usually) not distinguished as to their design features. This has led to doubts about the effectiveness of generating economic gains through FTAs. Yet, these doubts are a consequence of the large number of shallow FTAs in the samples used for the early empirical work. As noted, in CGE empirics, addressing the non-tariff elements in FTAs does lead to simulated economic gains that are one to two times higher than gains from tariff removal only. But the problem with CGE empirics is that one needs reliable ad valorem equivalents (AVEs) of the trading costs (as if these costs are tariffs) of behind-the-border measures. This is not only very difficult to accomplish but also cannot³³ be differentiated as to the specific measures that together determine the depth of FTAs. In other words, AVEs represent trading costs of a range of possible barriers that are not separately identified. The work from Dür, Baccini & Elsig (2014) shows decisively that deep FTAs matter much more and are worth doing for greater economic gains.

³² Within the scope of ten 'behind-the-border' policy domains, a total of over 100 items have been coded in order to measure the depth of commitments in these areas. This has been done for a large sample of no fewer than 587 FTAs (and other agreements like customs unions), which tends to improve statistical robustness.

³³ Or at best, selectively in some specific types of measures – see Pelkmans, Lejour, Schrefler, Mustilli & Timini (2014) for the European Parliament and (for TBTs only) Berden & Francois (2015).

6. Market access in industrial goods: An analysis of tariffs

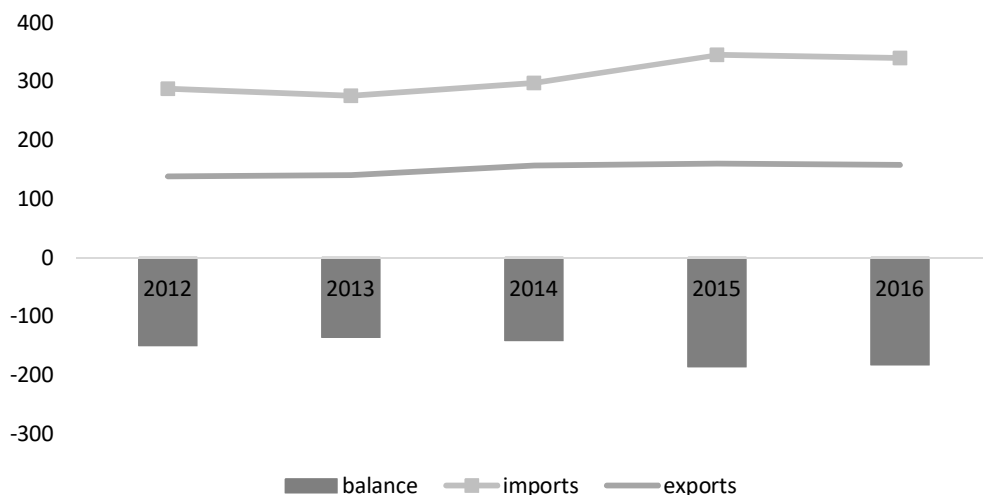
Tariffs in EU-China trade are still of some importance, more so in agro-food than in industrial goods, but even the latter are selectively of significance. Of course, the traditional core of any FTA remains the removal of tariffs. The present chapter deals extensively with tariffs on industrial goods. Chapter 8 addresses tariffs and TRQs in bilateral agro-food trade. In 2016, bilateral trade in industrial goods was some 30 times that in agro-goods, but the latter has been rapidly increasing whereas the former exchange has recently been lacklustre, yet still at a high level.

Section 6.1 analyses bilateral industrial trade and its sectoral composition. Mutual trade dependence at the sectoral level is studied as well. This is followed by a short section on tariff profiles (6.2) at the 2-digit level of sectors, for both economies. Since many tariffs are not so high or even low or zero, the hard kernel of the tariff negotiations in an FTA are the tariff peaks. Section 6.3 provides an analysis of tariff peaks at the 2-, 6- and 8-digit levels, as appropriate. The patterns of peak tariffs in China and in the EU are quite different and the totals of peaks are far higher for China. Note that, unless specified, we use *applied* tariffs (not the bound, most favoured nation (MFN) tariffs where these differ from applied, which is often the case for China, but not for the EU). In the actual negotiations, bound MFN tariffs matter of course, but the sensitivity of bilateral tariff removal is largely determined by the applied level.

6.1 Analysing bilateral trade and its sectoral composition

In chapter 3, it was noted how large bilateral (industrial) goods trade has become. China is a major supplier of fast-moving consumer goods in the EU and also exports many components or intermediate goods that are crucial for EU exports or competitive output in the internal market. The EU predominantly exports medium and high-tech goods or high-skilled intensive goods to China, which could be sophisticated intermediates for later assembly at the end of a GVC. Figure 6.1 shows bilateral industrial trade and the bilateral trade balance for recent years. After the rising trend of the (for the EU, negative) bilateral trade balance, the recent period shows first a stabilising trend for three years, followed by a sudden rise again in the deficit in 2015 and 2016. There is no denying that the EU trade deficit in goods is large – it is even larger than EU goods exports to China, although that difference has narrowed over time.

Figure 6.1 EU trade balance with China in industry (€ billion)



Note: The non-agricultural products classification used by NAMA/WTO is used.

Source: Authors' calculations using DG Trade (2018).

Besides the gigantic difference in value traded between agricultural and industrial goods – showing a ratio of 1 to 30 – another interesting difference with respect to agricultural trade is the higher sector concentration in EU-China trade (Table 6.1). Whereas sectoral shares of the most traded agricultural products range from 10.7% (fish) to 5.0% (wool) (see chapter 8, Table 8.1), the first two most traded industrial product groups, namely, machinery (various)³⁴ with 22.34% and electrical machinery with 20.94%, have much higher shares and the difference with the third amounts to at least 12 percentage points (vehicles other than railway, etc., mainly cars, at 8.18%). However, as the footnote shows, this is largely due to the amalgamation of product groups in a somewhat artificial HS 2-digit category (its label of ‘nuclear reactors’ does not cover the meaning for EU-China trade at all). The EU’s top three export-to-China groups make up 56% of all EU industrial goods exports to China: various machinery and automotive, each some 22.5%, followed by electrical machinery with another 11%. Two-way trade within the same HS 2-digit group, that is, intra-industry trade, at least at the 2-digit level, varies but is no longer always low (as one might expect in the case of developing countries): EU imports from China are highly concentrated with nearly half in electrical machinery and various machinery, which are also leading export product groups. In summary, while the first two product groups in bilateral trade are driven by both export to *and* import from China, four out of the other six most traded products are mostly determined by imports from China.

³⁴ HS 84 is an amalgam of electronic equipment (and parts), appliances for industrial use, air coolers, piston engines, printing machinery, machining centres for working metal, etc., under the 2-digit label of ‘nuclear reactors’, which is seriously misleading. In fact, a frequently used label is ‘various machinery’ which is employed in the text.

Table 6.1 Most traded products in industry, 2014

Total trade		EU exports to China		EU imports from China	
HS code and name	Share (%)	HS code and name	Share (%)	HS code and name	Share (%)
84, Nuclear reactors, etc.	22.34	84, Nuclear reactors, etc.	22.51	85 Electrical machinery, etc.	25.42
85, Electrical machinery, etc.	20.94	87, Vehicles other than railway, etc.	22.44	84, Nuclear reactors, etc.	22.26
87, Vehicles other than railway, etc.	8.18	85, Electrical machinery, etc.	11.13	62, Articles of apparel & clothing, not knitted	5.68
62, Articles of apparel & clothing, not knitted	4.06	90, Optical, photo, etc.	6.05	61, Articles of apparel & clothing, knitted	4.99
90, Optical, photo, etc.	3.60	88, Aircraft, spacecraft and parts	5.20	94, Furniture, bedding, etc.	4.46
61, Articles of apparel & clothing, knitted	3.50	30, Pharmaceutical products	3.93	95, Toys, etc.	4.06
94, Furniture, bedding, etc.	3.29	39, Plastics and articles thereof	3.23	64, Footwear, gaiters, etc.	3.29
95, Toys, etc.	2.83	71, Natural/ cultured pearls, precious stone	3.01	39, Plastics and articles thereof	2.54

Source: Authors' calculations using WIITS.

A closer look at intra-industry trade (IIT) may be insightful. A traditional indicator of two-way trade *within* sectors, which is what IIT really is, is the Grubel-Lloyd IIT index.³⁵ Such IIT may well express sectoral interdependence, for example, trade of components (more) in one direction and trade in final goods (more) in the other direction. This might be a result of GVCs, but it might also be due to European FDI in China as well, trading with subsidiaries in the EU; indeed, the two may well overlap. IIT might also be driven by differentiation of the preferences of customers or consumers. IIT tends to render the adjustment to the 'opening-up' of a sector to external competition less costly and quicker than for *inter*-industry trade (as the adjustment can often occur within different segments of the same sector, so that skills and even familiarity with technology may remain worthwhile). This property of adjustment, not least in the case of China, should be helpful, especially for workers and for companies with a not-too-narrow specialisation.

The Gruber-Lloyd index has to be employed, however, at several levels of product (dis)aggregation, in order to understand the detailed product specialisation. The Gruber-Lloyd index shown in Figure 6.2 gives a broad idea of the level of sectoral complementarity between the exports of the two economies. The 0.63 value registered for various machinery, the first product group in bilateral trade, is a direct consequence

³⁵ More specifically, it is $GL_i = 1 - \frac{|X_i - M_i|}{X_i + M_i}$; $0 \leq GL_i \leq 1$.

of the fact that it is placed first in European exports and second in European imports. Thus, it is clear that both economies nowadays have a comprehensive knowledge of the sector, partly of course through FDI, showing that China is beginning to develop in higher-skilled sectors with medium technology.

Figure 6.2 Gruber-Lloyd index for the most traded products in industry, 2014



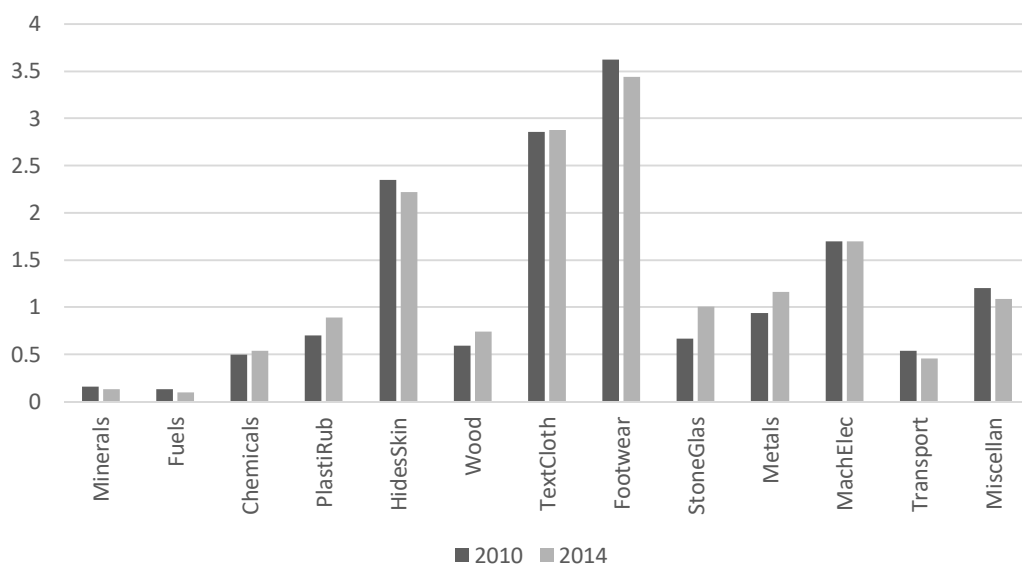
Source: Authors' calculations using WITS; 2-digit sector level.

This is the kind of refined specialisation that is bound to characterise more and more EU-China industrial goods trade in the future. It goes beyond the purpose of this FTA study to conduct further analysis at the 6-digit level for the various sectors in the list of leading traded products. Looking at the other two main export product groups of the two economies, they remain close to a Gruber-Lloyd value of 0.3, which indicates largely inter- (not intra-) industry trade. In other words, the EU has a strong comparative advantage in automotive, and China has it for large segments of electrical machinery, etc. Even lower Gruber-Lloyd indices can be observed for other product groups, e.g. clothing and toys, pointing to pure inter-industry trade. In other words, the EU has lost its comparative advantage in such sectors, except optical, photo, etc., which has a Gruber-Lloyd index even higher than 0.9. In fact, although the latter has been excluded in Table 6.1, it is still among the 10 most imported Chinese products by the EU with a share of 2.48% in 2014.

Figure 6.3 reports the change in Chinese revealed comparative advantages (RCAs) with respect to the world in 2010 and 2014. A country has an RCA for a specific

good when the index is above 1.³⁶ Hence, the exercise shows the sectors in which China is gaining importance in the international trade scenario and thus the direction in which the Chinese economy is moving. While China's largest advantages in hides/skins, textiles/clothing and footwear slightly decreased over the period while remaining considerably above the unit threshold, China has progressively been diminishing its disadvantages. For instance, China managed to obtain an RCA in both metals and stone/glass already in 2014, whereas for plastics/rubbers China still suffers from a slight disadvantage compared with the world as the index reports a value of 0.9 in 2014 after an improvement of 0.2 over the four years analysed.

Figure 6.3 RCA index for China in 2010 and 2014



Note: HS 2-digit categories: 25-26 minerals; 27-27 fuels; 28-38 chemicals; 39-40 plastics/rubbers; 41-43 hides/skins; 44-49 wood; 50-63 textiles/clothing; 64-67 footwear; 68-71 stone/glass; 72-83 metals; 84-85 machinery/electrical; 86-89 transport; 90-99 miscellaneous.

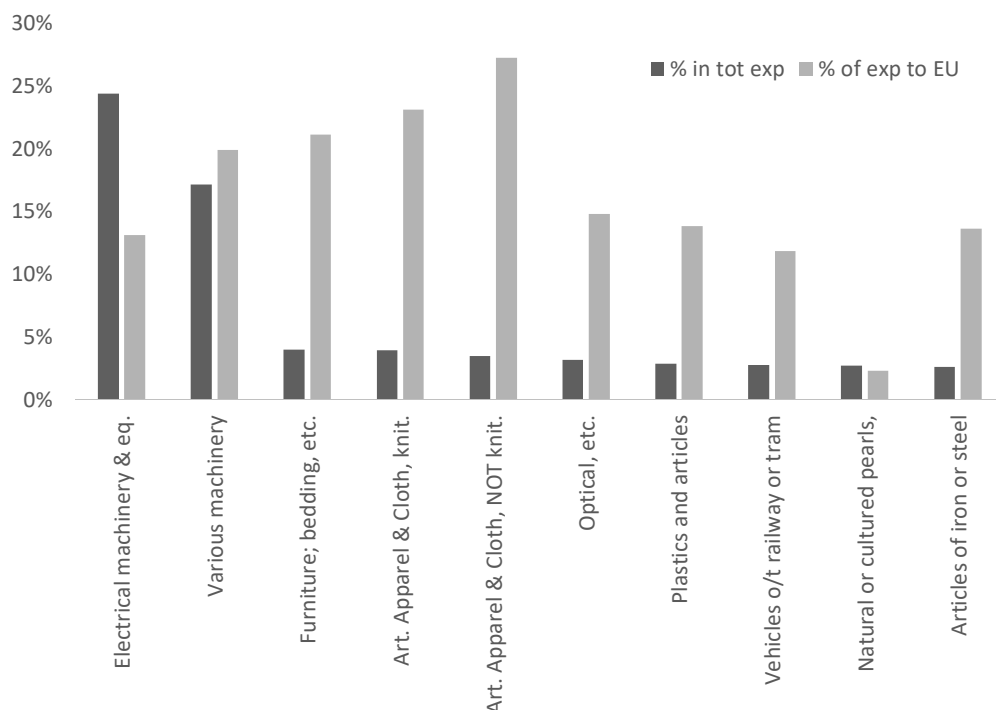
Source: Authors' calculations using WITS.

Another important element for the analysis is the 'dependence' of Chinese exports on the European market. Figure 6.4 reports both the shares of products in total Chinese exports (dark grey columns) and the amounts of these exports directed to the EU (light grey columns). Thus, 13% of the top Chinese exports of electrical machinery and equipment go to the EU, as well as 20% or more of each of the next four products in descending order. Therefore, one can identify two main reasons why textile tariffs might be important in tariff negotiations. First, articles of apparel & clothing, knitted or not knitted (respectively fourth and fifth among Chinese exports to the world) are the

³⁶ Revealed comparative advantage is measured by the RCA index = $\left(\frac{E_{ij}}{E_{it}}\right) / \left(\frac{E_{nj}}{E_{nt}}\right)$; where i is the country index, n is the set of countries, j is the commodity index, and t is the set of commodities.

Chinese exports with the highest dependence on the European market; second, the simple average of the MFN applied tariff of the European textiles is the highest among all, with an average duty of 7.2%.

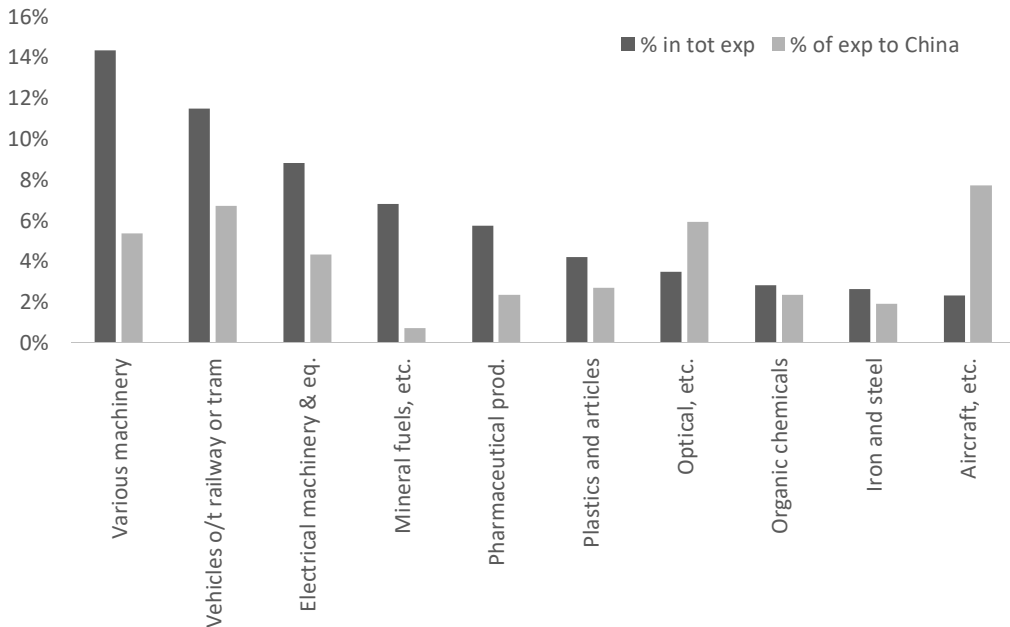
Figure 6.4 Top-ten Chinese exports to the world (shares in total exports and shares directed to the EU), 2014



Source: Authors' calculations using WITS.

On the European side (Figure 6.5), the products with the highest shares of Chinese exports are vehicles other than railway (mainly automotive) and aircraft, etc., both belonging to the transportation sector. Tariffs on miscellaneous products can also be of interest, first because optical, etc. is significant in bilateral trade, and second because furniture, bedding, etc., is the third Chinese export in terms of exports to the world and for its share of exports to the EU.

Figure 6.5 Top-ten European exports to the world (shares in total exports and shares directed to China), 2014



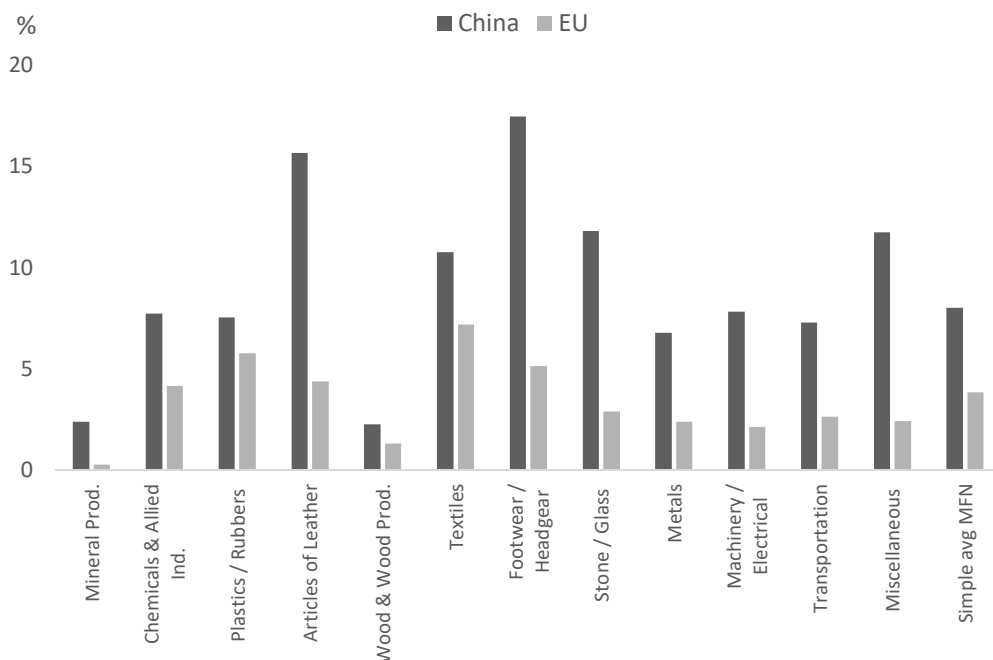
Source: Authors' calculations using WITS.

6.2 Industrial tariff profiles of the EU and China

Simple averages of MFN applied tariffs in industrial goods are lower than those for agricultural goods (see chapter 8, Figure 8.2) and this is true for both economies. As shown in Figure 6.6, China has an overall simple average of MFN applied duties in the industrial sector of 8% (at the HS 2-digit level in 2014), more than double the EU average. Machinery/electrical, chemicals and transportation have tariff averages of around 7–8%. In 2014, 33.6% (47.7%) of European (Chinese) exports to China (the EU) were in electrical machinery and equipment and in various machinery (which together constitute the machinery/electrical category in Figure 6.6) counting for roughly €220 billion bilaterally traded.

What is striking in Figure 6.6 is that, for every sector specified in the figure, Chinese average tariffs are higher than those of the EU. For some sectors, the discrepancies are large, say, half or more: mineral products, leather articles, footwear, stone/glass, metals, machinery/electrical, transportation and miscellaneous. Some of these sectoral tariff barriers would seem to be less interesting for EU exporters (minerals, footwear and stone/glass), but in other sectors tariff removal would be most welcome for EU business. For Chinese industrial exporters, EU average tariffs are hardly a serious barrier, with the possible exceptions of textiles/clothing, leather (though much less high than China's) and plastics/rubbers.

Figure 6.6 EU and China, simple MFN applied averages in industry, 2014



Note: HS 2-digit codes: Mineral prod. 25, 26, 27; chemicals & allied ind. 28, 29, 30, 31, 32, 33, 34, 36, 37, 38; plastic/rubbers 39, 40; articles of leather 42; wood & wood prod. 44, 45, 46, 47, 48, 49; textiles 50, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63; footwear/headgear 64, 65, 66, 67; stone/glass 68, 69, 70, 71; metals 72, 73, 74, 75, 76, 78, 79, 80, 81, 82, 83; machinery/electrical 84, 85; transportation 86, 87, 88, 89; miscellaneous 90, 91, 92, 93, 94, 95, 96, 97.

Source: Authors' calculations using WITS.

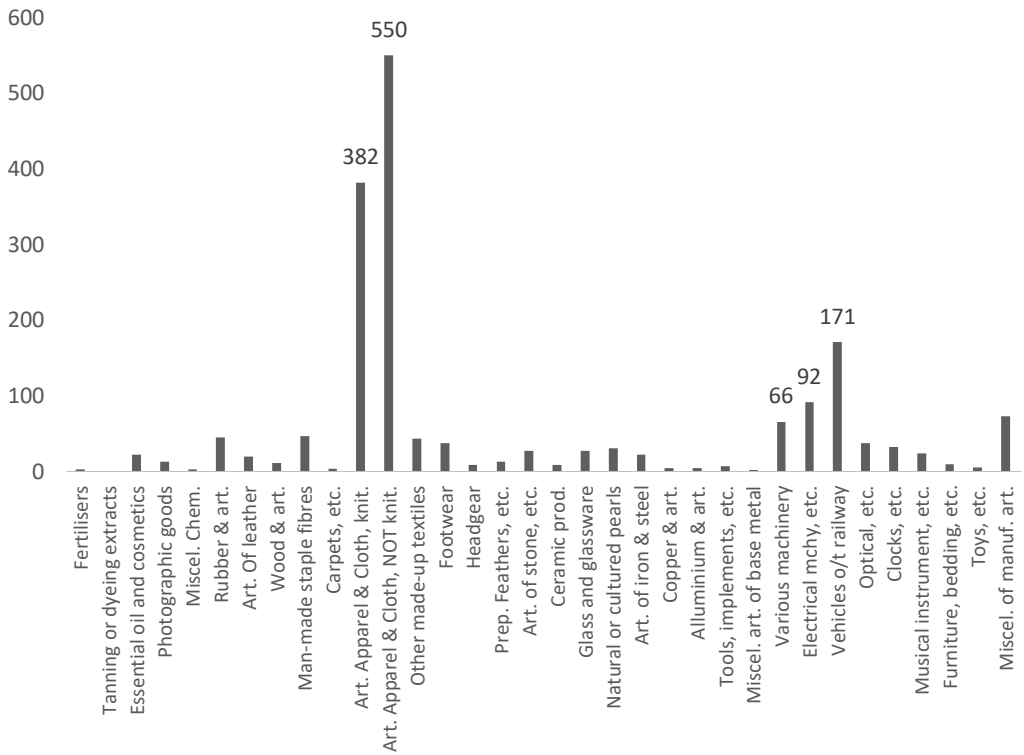
6.3 Where China and the EU differ: Tariff peaks

In East Asia, it is not unusual for tariff peaks to be numerous but highly concentrated in a few subsectors, and with a 'laser approach' of using 8 (or sometimes even 10) digits. A tariff peak is defined by the WTO as an applied duty of higher than 15%. China has far more (8-digit) tariff peaks for industrial goods (more than 1,400) than the EU (45), but not in many sectors. As Figure 6.7 shows, there are 6 HS 2-digit sectors having more than 50 8-digit tariff peaks. Towering above all others are clothing knitted and not knitted with (respectively) no fewer than 382 8-digit peaks and 550 such peaks. This is a plainly protectionist approach to defend Chinese industry against emerging, low-skilled, comparative-advantage countries such as Bangladesh, India, Vietnam and Cambodia, but not of much importance for the EU, except in a few luxury clothing items where EU exporters might still be competitive. Therefore, nearly 1,000 peaks of the 1,400-plus are largely irrelevant for the EU in an FTA, and it is unlikely that China would be sensitive to their full elimination in a bilateral with the EU;³⁷ the EU's

³⁷ Of course, such peaks remaining vis-à-vis third countries, while becoming zero in the FTA, would inevitably cause some trade diversion in the margin.

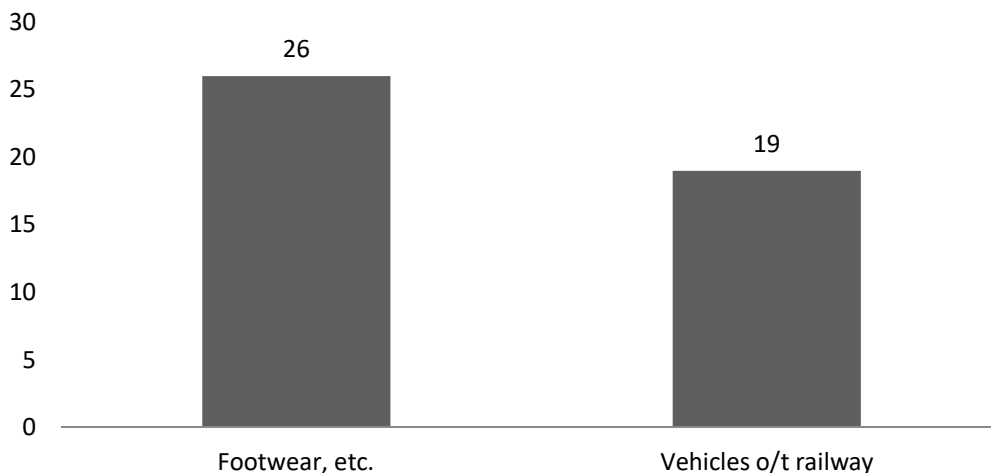
offensive interest is to remove the tariffs for the competitive luxury items in clothing. Note that the EU has slightly higher tariffs for clothing but never as high as 15%. The other four sectors with more than 50 peaks are various machinery with 66 peaks, electrical machinery with 92 peaks, automotive with 171 peaks and a remaining category 'miscellaneous'. In Figure 6.8 the EU 8-digit tariff peaks are shown to appear in only two sectors: footwear (with 26) and automotive (19). None of these peaks is higher than 25%.

Figure 6.7 Chinese peaks (MFN applied duty > 15%, 8-digit lines) in industry classified at the HS 2-digit level, 2014



Source: Authors' calculations using WITS.

Figure 6.8 European peaks (MFN applied duty > 15%, 8-digit lines) in industry classified at HS 2-digit level, 2014

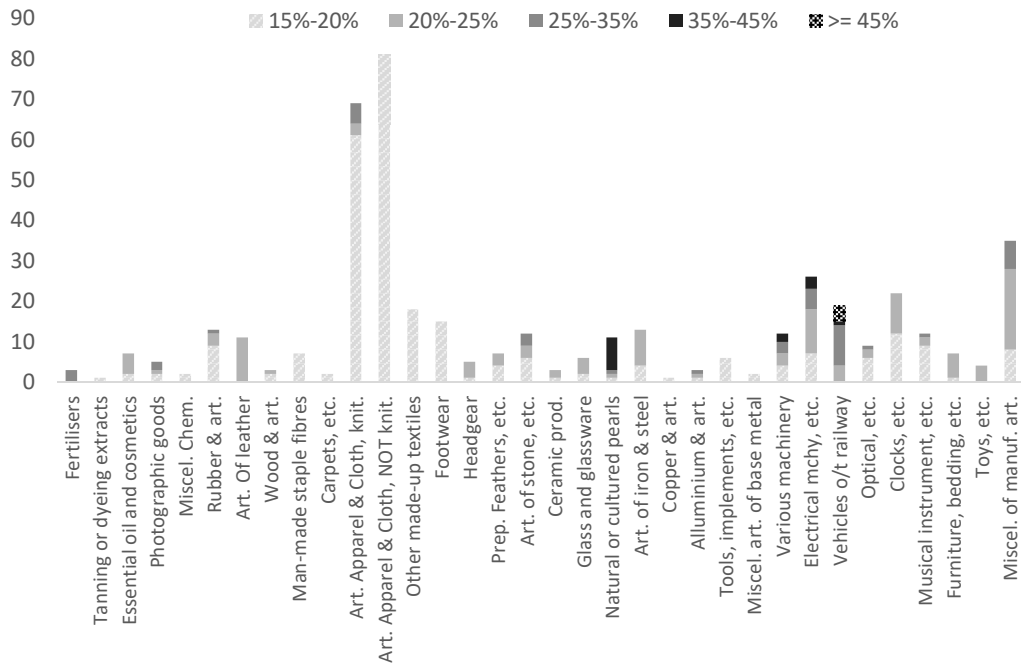


Source: Authors' calculations using WITS.

Figure 6.9 reports the distribution of Chinese peaks (at the 6-digit level, not 8 digits, as in Figure 6.7) among duty ranges. The lowest-duty range groups 57.2% of all industrial peaks, but 55% of these belong to apparel & clothing, either knitted or not knitted. As the latter products are of limited importance in the European exports basket, their complete bilateral liberalisation should not be too difficult. Nevertheless, some specific lines concerning high-quality products might be taken into consideration by EU negotiators. For example, high-quality suits are of interest for European businesses that want to ensure a promising position in the top segment of a market probably growing hand-in-hand with Chinese GDP per capita. Looking at various machinery and at electrical machinery and equipment, both in the top three of the most exported products worldwide by the EU and China, they include 6-digit lines with duty averages mostly above or equal to 20% (66.66% for various machinery and 73.08% for electrical machinery and equipment). For cars (vehicles other than railway), none of the 6-digit lines fall in the lowest duty range while some 6-digit peaks fall in the highest duty range, as defined in Figure 6.9. For example, for Chinese imports of motorcycles (HS 8711), four 6-digit lines are subjected to prohibitive tariffs of 45%, one of 40% and another one of 30%.

Figure 6.9 shows that Chinese peaks are often far higher than 15% or so. Of the highest ranges of the five levels distinguished, the highest are all 6-digit tariffs above 45% (prohibitive; 4 lines) and those between 35% and 45% (usually prohibitive; 14 lines). Yet, even at (only) the 6-digit level, no fewer than 258 tariff peaks are found, ranging between 15% and 20%, 129 6-digit peaks between 20% and 25%, and another 46 6-digit lines between 25% and 35%, which can easily be prohibitive, certainly when even light TBTs would be relevant as well.

Figure 6.9 Distribution of Chinese peaks by products and duty ranges, industry, 2014



Source: Authors' calculations using WITS.

The following inferences from the present chapter are the most important:

1. Industrial goods trade with China is largely inter-industry trade – that is, the comparative advantage sectors of the EU and China differ.
2. But for two sectors, intra-industry trade is considerable (electrical machinery) or even high (optical, photo, etc.).
3. Given rapidly rising wages and the upskilling of the Chinese labour force, plus strong inflows of FDI, China is bound to gradually augment the shares of more sophisticated goods or generate more value added in the tasks in GVCs that China can assume. This leads to more intra-industry trade, fitting *grosso modo* the aims of the Chinese leaders in their new growth model.
4. For the EU, this means that adjustment to the new specialisation patterns China develops should be less costly socially and economically than the former adjustment to relatively labour-intensive (indeed, low-skilled intensive and low-tech) goods, the production of which was almost entirely reallocated during the period of the mid-1980s to the early 2000s.
5. Chinese (applied) industrial tariffs are on average about double (8%) the EU tariff average. But this says little because Chinese tariff protection is sharply divided between peaks tariffs, at an extremely fine (8-digit) level of specialisation, and all other industrial tariffs.

6. While the EU maintains a few (45) peak tariffs in footwear and in vehicles (cars and motorbikes), China has more than 1,400 peak tariffs at the 8-digit level, although nearly 1,000 of them are only in clothing (knitted and not knitted), which is of little interest to EU exporters having lost comparative advantage. In some other sectors such as machinery, electrical machinery and automotive (all strong EU export sectors), however, there are still quite a few peaks and the frequency of higher peaks (beyond, say, 20%) is such that the EU will undoubtedly see it as an offensive interest to obtain full, bilateral tariff removal in these sectors, which would enable EU companies to exploit the full potential of their current comparative advantage.

7. Market access in goods: Trade defence remedies

7.1 Relevance of trade defence for an FTA

To correct for harmful price distortions of specific imported goods, EU companies can consider recourse to trade defence instruments (TDIs), such as anti-dumping and anti-subsidy measures. They can request that the EU target specific countries, companies (and products) when such distortive practices with respect to EU imports cause them injury. The impact of such highly targeted remedies on the *total* goods flows between the country (here, the EU) that starts the investigation and the one under investigation, is negligible, as by definition anti-dumping and anti-subsidy measures hit a highly specific group of companies in a (group of) specific country(ies) to preserve an undistorted competitive environment in a specific product category.³⁸

The question is now whether an FTA (here, between the EU and China) is likely or even expected to alter the application of trade defence instruments by both parties. The short answer is: usually not. In Box 7.1, a few references to recent FTAs concluded by the EU, are provided to underline this point.

Box 7.1 Chapters on trade remedies in EU FTAs

In recent FTAs concluded by the EU, one finds chapters on trade remedies, but on the whole, they seem to do little more than reassure one another about the parties' adherence to WTO rules, transparency and ample possibilities for consultation. In some FTAs, e.g. with South Korea, chapter 3 is long on bilateral safeguard measures, global safeguards even special agricultural safeguards, which are about sudden surges in imports after tariff elimination, which typically reflect fears stemming from the past, but have nothing to do with dumping as such. In the Singapore FTA with the EU, chapter 3 also includes safeguards but with far fewer specifications and nothing on agro-food. In CETA's chapter 3, the articles on safeguards are few and minimal. All refer extensively to the WTO rules.

On anti-dumping and anti-subsidy, all that CETA specifies is to reaffirm the rights and obligations of the two Parties under the WTO Agreement on Anti-Dumping and the Subsidy and Countervailing Duties Agreement, emphasise transparency, stress the full opportunity for each party to defend its interests and lay down the option of the lesser duty rule (which only the EU uses – based on the injury margin and not on the higher dumping margin).

³⁸ According to the European Commission's "Evaluation of the European Union's Trade Defence Instruments" (Brussels, 2012), the impact on bilateral flows hit by dumping (or the anti-dumping procedure) is not large but the effect on the specific product category can be noticeable as it temporarily reduces 'dumped' imports. Moreover, TDIs can affect entry decisions of the firms and alter the probability of exit from the market since they ensure a provisional protection against unfair competitors. As noticed in past studies, the effectiveness of TDIs is not only motivated by the possibility of restoring competitiveness, but also in terms of threat. If TDIs are used in a credible and thorough way, the commercial counterpart will have a higher incentive to abide by trade rules.

The FTAs with Vietnam and Singapore are similar. The one with South Korea is more elaborate and comprises a double remedy article (3.12), but these textual differences altogether do not add up to much. In other words, the trade remedies chapters in FTAs reconfirm the WTO rules, with a few minor additions.

One might imagine that the parties commit not to apply anti-dumping unilaterally (following WTO rules, of course) and commit first to go for consultation or perhaps act only after the search for an agreed solution. Ideally, one might also suggest that dumping, as a distortion of competition, is dealt with under competition law and policy, but this would require an exceptionally close cooperation between the FTA partners. Such degrees of cooperation in competition policy are hardly found anywhere when FTAs are concluded. Probably, the most extreme form of rejecting anti-dumping in a preferential agreement is Art. 91, EEC, now long deleted from the Treaty, which explicitly allowed reverse dumping (back to the EU member state where the goods came from) in the transition period of the EEC customs union. One would not normally expect even a 'deep and comprehensive' FTA with China to change the application of trade defence instruments. But why then discuss TDIs in this study?

The only logic that explains it is a political one, not a functional one. Even though the total amount of trade in goods affected by TDIs (usually, anti-dumping, AD) is very small, the sensitivity on both sides is far greater. China finds – as our several interviews in Beijing, discussions in Europe with Chinese business and other sources make abundantly clear – that the EU targets Chinese exports to the EU frequently and this creates anxiety and uncertainty among exporters. Indeed, while China was targeted (through initiations) on average 28% between 1995 and 2014 – which is higher than any other trading partner – China's share went up shortly after its accession to the WTO and reached no less than 47% (but here, of AD measures in force) in 2014.³⁹

By late November 2017, based on the Commission's list of AD measures in force (which also lists separately extensions to other countries due to circumvention), there were 128 AD measures in force, no less than 86 of which concerned China (68%). China is therefore right. If all cases would properly reflect dumping in the sense of selling in the EU at prices lower than the market-driven costs at home, however, there would still be no problem. But there is a genuine doubt whether China has sufficiently proceeded to be called a 'market economy' and that concern lies at the root of the EU's anxiety, especially in a few specific sectors. The problem is that a test of being a market economy is not particularly precise, even though it is well understood qualitatively. The authors have decided that a short treatment of this problem is justified by the anxieties on both sides, which threaten to affect negatively the climate in which a possible FTA would have to be negotiated. In other words, there is no direct connection between an FTA and TDIs, but future negotiations on an FTA – as the Chinese leadership suggested – would only be feasible in an atmosphere of a minimum level of mutual trust supported by political will on both sides.

³⁹ See Yalcin et al. (2016). It is true, however, that the US and India had even more AD measures in force in 2014, and with higher (US) or much higher (India) AD duties.

7.2 Recent bilateral application of trade defence

Council Regulation (EC) No. 1036/2016 on protection against dumped imports, in compliance with the WTO Anti-Dumping Agreement, allows the EU to set an ad valorem duty to balance dumping, once there is sufficient evidence that a dumped price has been applied causing injury to some specific EU companies.⁴⁰ There are several elements to be proved, such as the link between the dumping and the injury, and the fact that the potential anti-dumping measure would not be against the interest of the Union (for example, also considering those using the imports as inputs). The same principles apply to the Council Regulation (EC) No. 1037/2016 on protection against subsidised imports by imposing a countervailing duty.

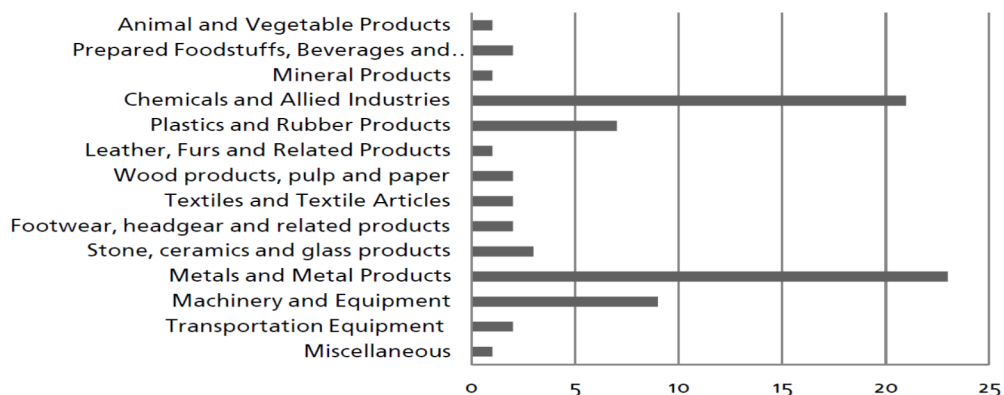
The setting of the anti-dumping duty follows the *lesser duty rule*, according to which the EU duty applied to the importers does not correspond to the dumping margin (defined as the difference between the 'normal value' of the good imported and the export prices applied) but to the injury margin suffered by the company that is usually lower. The injury margin is usually chosen to set the anti-dumping duty, so the methodology behind its calculation is crucial to offset the injury caused by dumped imports. The investigation period usually lasts 15 months. Nine months after the start of the investigation provisional measures can be imposed. This is followed by definitive duties collected at the end of the period, with the implementing regulation confirming or eventually modifying the conditions set in the provisional act. Definitive measures can be in force for five years, after which the measure has to be reviewed and possibly prolonged but never automatically.

Figure 7.1 and Table 7.1 show EU TD investigations by major industrial sector over the period 2005–10. It identifies a typical sectoral pattern in anti-dumping cases: the dominance of products from large-scale homogeneous goods sectors, such as (bulk) chemicals, steel and other metal products and plastics. Dumping by firms may stem from many reasons, including normal commercial conduct (e.g. to penetrate a new market with temporarily low prices) but also an exercise of market power by trying to squeeze out competitors through predatory pricing, or disparate, aggressive selling tactics in the case of overcapacity at home in order to survive in the short run or avoid immediate adjustment.

Table 7.1 refers to EU investigations against China by sector by mid-2015.

⁴⁰ Dumping itself is held to exist between countries A and B, once exports of good x from (say) B to A are priced lower in the A market than in B's home market.

Figure 7.1 EU Trade defence investigations by major industrial sector, 2005–10



Source: European Commission (2010).

Table 7.1 Ongoing EU investigations against China by product group (mid-2015)

Product	Proceeding	Measures
Acesulfame Potassium (ACE-K)	Anti-dumping	Measures in force (prov.)
Aluminium foil (certain)	Anti-dumping	Measures in force
Aluminium foil (certain)(CAF)	Anti-dumping	No measure
Aspartame	Anti-dumping	No measure
Ceramic foam filters	Anti-dumping	No measure
Citric acid	Anti-dumping	Measures in force
Cold-rolled flat steel products (certain)	Anti-dumping	No measure
Grain-oriented flat-rolled products of electrical steel (GOES)	Anti-dumping	Measures in force (prov.)
Molybdenum wires (certain)	Anti-dumping	Measures in force
Rebars (high fatigue performance steel concrete reinforcement)	Anti-dumping	No measure
Seamless pipes and tubes, of iron or steel (certain)	Anti-dumping	Measures in force
Sodium cyclamate	Anti-dumping	No measure
Solar panels	Anti-dumping	Measures in force
Solar panels	Anti-subsidy	Measures in force
Tartaric acid	Anti-dumping	No measure
Wire rod	Anti-dumping	Measures in force (1)

Source: Authors' own elaboration using European Commission (2015).

Table 7.2 shows the procedures initiated by China against other countries: one observes that out of 114 cases, 15 are against the European Union and half of them are against products of chemicals, while the remaining half are spread over plastics, metals, paper and machinery.

Table 7.2 Procedures initiated by China by product and by country
(in force as of 31 December 2015)

Member	(a)	(b)	(c)	(d)	(e)	(f)	(g)	Total
United States	12	2	1	2	2			19
Japan	11	2	3	2	1			19
European Union	7	2	2	1	2		1	15
Korea, Rep. of	8	2						10
Chinese Taipei	5	3						8
India	4	1						5
Russian Federation	3	1						4
Singapore	3	1						4
France	1	1						2
Thailand	2							2
Brazil				1				1
Canada				1				1
Italy		1						1
Total	56	16	6	7	5	0	1	91

Notes on products: a) Products of the chemical and allied industries; b) resins, plastics and articles thereof; rubber and articles and thereof; c) base metals and articles thereof; d) paper, paperboard and articles thereof; e) machinery and electrical equipment; f) live animals and animal products; and g) prepared foodstuffs.

Source: WTO (2016). WTO document G/ADP/N/280/CHN, 10 March 2016.

7.3 The 2017 revision of EU trade defence measures and the status of China

In anti-dumping (AD) procedures, until recently, the possibility was foreseen to calculate the duties without taking into account pricing conditions in the country under investigation when this country is not considered a 'market economy' by other WTO importing members. The logic of this provision is that, in a non-market economy, the market-driven price mechanism does not function properly (or not at all), so that domestic prices in such an economy cannot be trusted to reflect average or marginal costs. Since the basis of an anti-dumping investigation is precisely the domestic costs (or price, for practical reasons) asked by local companies, the lack of reliable (market) prices in that economy requires another solution. The possibility of considering it a 'non-market economy' implied that the reference price, needed to compute the duty, must be found in an 'analogue' country where the price mechanism is guaranteed to work normally.

In practical terms, the consequence of the non-market economy status is that the dumping margins applied tend to be larger and hence the duties that companies which dump good *x*, will pay, are higher. How much higher is not, *a priori*, clear but it is not far-fetched to think of 20%, 30% or still higher extra duty. Often EU producers that fear being hit, especially now that China is experiencing huge overcapacities in, e.g. steel, simple ceramics, selected bulk chemicals and aluminium, leading them to suspect 'distress dumping' on a very large scale, compare EU AD duties with US AD duties, which are indeed much higher on average. From Dr. Chad Bown's database at the World Bank, it becomes clear that the average AD margin in US cases against China is no less than 154% compared to an average of 49% for other countries targeted by US AD duties. In the EU, AD margins vis-à-vis China average 61%, with the average for other countries hit by AD duties being 31%. These companies/sectors argue that the EU should neither routinely apply the lesser duty rule, nor terminate the non-market status

of China as long as these huge overcapacities do not lead to bankruptcies and market exit in China.

Art. 15 in the China WTO accession protocol includes the possibility of considering the country still a 'non-market economy' given the large subsidisation policy in place, as well as widespread price controls and state guarantees for SOEs. Subsidies (including very easy finance of new investment, e.g. in the capacity of SOEs, by state-owned banks, themselves therefore SOEs) and state guarantees in China have been broadly supported by Five-Year Plans established by the Party. This largely unchecked process in some sectors worked one or two decades ago as exports kept on growing rapidly but it has assumed absurd proportions over the last decade or so. In the recent low-growth climate (for China, at least) the true dimensions of Chinese overcapacity in some industrial sectors have become much clearer. A frank admission in the *China Daily* of 4 December 2015, quoting a speech by Prime Minister Li on how to reduce overcapacities, was revealing: overcapacity in steel had reached around 400 million tonnes, half of the Chinese capacity and twice the entire steelmaking capacity of the country that is the second-most important producer of steel worldwide! Overcapacities of this size cannot possibly be maintained beyond half a year or so without bankruptcies or applying drastic capacity cuts. The incentives or mere survival pressures to export these products abroad at marginal or below-marginal cost prices (often considered dumped for non-subsidised industries) are extremely powerful and undermine a market-based competitive trade environment. They may also cause import-competing industries in the EU to cut capacity (and lay off workers) that may well be potentially competitive under market-driven circumstances.

In the EU and the US, there was an animated debate on whether the Art. 15 provisions of granting the market economy status (MES) to China, or not, would by the end of 2016 automatically expire. The idea was that by December 2016 and *solely* for purposes of AD duty calculations, WTO members should recognise China as a market economy in anti-dumping investigations (not in general terms!). Ideally, this should have been automatically applied by the WTO at the time of China's accession in 2001, but many WTO economies refused to do so as Chinese industry (in particular, SOEs) is often supported in various ways and so able to set artificially low prices in the international context. By granting China MES, domestic Chinese prices would become the guide. For those feeling threatened by exports in sectors with huge overcapacity, this de facto lowering of AD duties is regarded as less effective for their protection (trade defence). The duties under MES applied on dumped imports are likely to be lower compared with when the 'analogue' country (often the US, but also Turkey; this would seem to be less of a problem when India is used as the EU has also done, etc.) is chosen as the 'like' economy for price comparison, but of course without a subsidised industry and with tight financial constraints for companies in case of some overcapacity.

The EU and US debates on the market economy status tend to mix up the broader notion of whether China is already a market economy in general – the theme here is how far reforms have come and what remains to be done – with the highly specific and technical question of whether or not WTO procedures on China's accession impose the granting of that status by December 2016 *for the purpose of anti-dumping calculations*.

China does not have any doubt, as it is convinced that there is an automatic recognition of MES, regardless of the different legal interpretations discussed. The recognition, according to the Chinese authorities, is automatic and not conditional on compliance with the five criteria imposed by EU law (as discussed further below) on what a market economy is. Below we summarise the thrust of the legal and economic debate.

7.3.1 *Is it about law?*

The legal discussion is mainly focused on two paragraphs of Art. 15, specifically Art. 15(a)(ii) and (d) of the Accession Protocol. It is worth recalling that, at the time of accession, many WTO members preferred to apply a non-market economy status to China exactly as had occurred for other former communist countries, assuming that the legacy of the planned economy was likely to generate an unfair market and trade environment for some products for years to come. The assumption need not apply by definition, but it forces the country under investigation to show that a specific sector reflects market-economy conditions, and if that is shown empirically, the amount of the duty can be based on domestic prices. Moreover, there was probably hope in 2001 that a sustained Chinese reform process – which did occur before its WTO accession – would be continued and hence, this provision could have been subject to a revision after several years.

According to Art. 15(a), WTO members cannot use domestic Chinese prices to set anti-dumping duties by applying the methodology envisaged for countries considered non-market economies when “the producers under investigation cannot clearly show that market economy conditions prevail in the industry producing the like product with regard to manufacture, production and sale of that product”. Paragraph (d) states that the market economy status must be granted once China meets the criteria set by the WTO importing country. For the EU, five criteria are found in the basic Council Regulation (EC) No. 1225/2009. However, the paragraph continues and may confuse the reader by stating:

[i]n any event, the provisions of subparagraph (a)(ii) shall expire 15 years after the date of accession. In addition, should China establish, pursuant to the national law of the importing WTO Member, that market economy conditions prevail in a particular industry or sector, the non-market economy provisions of subparagraph (a) shall no longer apply to that industry or sector.

The last paragraph seems to be intentionally contradictory and leaves room for interpretation. The situation in early 2018 is that the EU has *de facto* dropped earmarking China as a non-market-economy (again, for purposes of anti-dumping), as will be explained below, whereas the US has not done so, and hence, does not grant *de facto* or *de jure* MES. In 2017, China filed a complaint in the WTO Dispute Settlement and a panel has been established.

7.3.2 *Is it about economics?*

Although the issue should in principle concern anti-dumping practices that, in the final analysis, hit only a very small percentage of bilateral trade flows (barely over 1%) and few specific products, a debate on how the state intervenes in the Chinese economy and

its market functioning seems hard to avoid. There are many signs that China still deeply intervenes in many ways in market functioning, through direct subsidies, state guarantees, other ‘protection’ of SOEs (often operating in the sectors most hit by AD duties historically), a lack of access to public procurement, etc. This is not to deny the immense progress the country has made in the last decade in moving towards a market-based economy, even if less ambitious than perhaps expected by WTO members.

Defining what is a market economy and what is not in a broader sense is not an easy task. The EU has set five criteria recognised in the basic anti-dumping regulation that must be respected to grant the status also according to Art. 15. The basic EU regulation defines a market economy in anti-dumping procedures according to the following five criteria:

1. Low degree of government influence over the allocation of resources and decisions of enterprises, whether directly or indirectly (e.g. public bodies), for example, through the use of state-fixed prices, or discrimination in the tax, trade or currency regimes;
2. Absence of state-induced distortions in the operation of enterprises linked to privatisation and absence of use of non-market trading or compensation systems (such as barter trade);
3. Existence and implementation of a transparent and non-discriminatory company law that ensures adequate corporate governance (application of international accounting standards, protection of shareholders, public availability of accurate company information);
4. Existence and implementation of a coherent, effective and transparent set of laws that ensure the respect of property rights and the operation of a functioning bankruptcy regime; and
5. Existence of a genuine financial sector that operates independently from the state and which, in law and practice, is subject to sufficient guarantee provisions and adequate supervision.

The only official and relatively recent source that applies these criteria goes back to 2008, when the European Commission⁴¹ released a working document stating that only criterion 2 had been met. The other four, despite considerable progress, had not yet been met, so granting the status was not justified.

Since this assessment, a small number of studies have been carried out (see e.g. Taube & in der Heiden, 2015; and Scott & Jiang, 2015),⁴² all supported by industrial groups that fear being hurt by the granting of the status. The studies assess whether

⁴¹ See European Commission, “Progress by the Republic of China towards graduation to market economy status in trade defence investigation”, Commission Staff Working Document, SEC(2008) 2503 final, 19.09.2008 (http://trade.ec.europa.eu/doclib/docs/2009/june/tradoc_143599.pdf).

⁴² See Taube & in der Heiden (2015) at http://static1.squarespace.com/static/5537b2fbe4b0e49a1e30c01c/t/558ba747e4b004a9529395ae/1435215687902/MES+China+Study_Taube_Full+Version-25June15_F.pdf; see also Scott & Jiang (2015) at <http://static1.squarespace.com/static/5537b2fbe4b0e49a1e30c01c/t/55fc0373e4b09a69209aa9c2/1443621109236/Unilateral+grant+of+Market+Economy+Status+to+China+would+put+millions+of+EU+jobs+at+risk.pdf>.

those criteria are being met today and what economic impacts a potential granting of MES would have on the EU economy in terms of job losses and overall production. To address both questions, many assumptions must be made about the linkage of the change in the pricing methodology in each anti-dumping case in relation to the ability, in the margin, of a firm to keep or not (some of) its employees. Not only can the adopted methodologies be critically debated, but also the studies do not consider the potential benefits/costs to other economic actors besides the producers (e.g. the consequences for importers). Indeed, the possibility of granting China MES could reduce the effectiveness of trade defence instruments but it is difficult to say by how much. The methodological difficulties are the same that apply to the identification of the general impact on trade flows of the application of TDIs. What has been learned in past assessments of TDI regulations is that confidentiality of actual import flows from companies affected by investigations and the definition of counterfactual flows, which would be needed to measure the effect of the non-application of the duty, could render the exercise very imprecise.

7.3.3 *The revised trade defence regime of the EU*

By the end of 2017, the EU found a way out of the conundrum and the Council and the European Parliament as the two legislators laid down Regulation 2017/2321 amending Regulation 2016/1036 for anti-dumping and Regulation 2016/1037 for countervailing duties in the case of proven subsidies.⁴³ The first change concerns the way in which trading partners are classified. Whereas before, trading partners of the EU were either considered ordinary market economies or NMEs (non-market-economies), the rule imposes a distinction between WTO contracting partners (and of course, China is one of them) and non-WTO countries (for example, Tajikistan). In so doing, the EU has *de facto* granted MES to China and e.g. Vietnam, even though the merits of this distinction are unclear (see below). The second change is that, although for all WTO countries the usual anti-dumping calculations will apply as a rule, this will not be the case if 'significant distortions' are found in the exporting country, which will make it impossible to have confidence in the pricing mechanism as the basis for anti-dumping calculations, or for countervailing duties. In such cases, an appropriate 'representative country' will be chosen to identify benchmarks or costs driven by market mechanisms so that the calculations can be made. A third change is that such a 'representative country' should have a similar level of development as the exporting country suspected of dumping, thereby excluding the US or e.g. Canada, both used in the past as 'analogue' countries.⁴⁴ In case the distortions also affect raw materials and energy, as inputs, the EU's traditional stance that the established 'dumping margin' shall not be the basis to calculate AD duties but, instead, the (lower) injury margin.⁴⁵ This so-called

⁴³ OJEU L 338/1 of 19 December 2017.

⁴⁴ In case there are several candidates to serve as the 'representative country', the Regulation prescribes taking the country with a sufficient degree of social and environmental protection, as this may also affect costs.

⁴⁵ Since it is the injury to EU companies that is supposed to matter and ought to be corrected.

“lesser duty rule” is therefore inapplicable for raw materials and energy, but it remains valid for all other elements of the cost price.

The crux of the matter is thus what constitutes ‘significant distortions’. It is not so easy to demarcate exactly where the lines will be drawn, i.e. when distortions (which exist in almost any economy) become significant for the purposes of EU trade defence. In the final analysis, they must impact prices or costs. Examples mentioned by the Commission include: i) when a market contains a large number of firms operating under the ownership, control or guidance of the authorities; ii) when there is a state presence in firms allowing for interference in prices, costs or pursuing policy objectives; or iii) when public policies discriminate in favour of domestic suppliers, or exporters’ access to financing pursuing public policy objectives.⁴⁶ These examples are possibly valid but remain extremely general, particularly when considered on a scale of lower degrees of ‘significance’ of distortions and when compared between many countries having distortions of some kind. Therefore, the term ‘significant’ has to be interpreted as i) important enough, ii) having a measurable impact on costs and prices of the relevant firms, such that dumping can be attributed to this cause and iii) relevant for anti-dumping and for anti-subsidy as the WTO Appellate Body has forbidden to impose ‘double remedies’.⁴⁷ One can imagine how difficult it might be for business to file an AD case on the basis of ‘significant distortions’ when in-depth knowledge and economic analysis will be required about the exporting countries’ domestic practices. The regulation therefore requires the Commission to publish reports on specific countries once it has ‘well-founded indications of the possible existence of significant distortions’ and these can be used by business as one form of evidence in these cases.

With all its experience, the Commission of course realises these difficulties and has immediately begun to publish reports. The first one came out on the day that the new regulation was published. Not surprisingly, it is about China, as it has recently been the most frequently targeted country by far.⁴⁸ This report is extremely rich. It comprises a general survey of the organisation of the economy, a lengthy section on allocation and pricing issues for the various factors of production and finally an analysis on three sectors: steel, chemicals and ceramics. Its overall conclusion is that “...the State continues to exert a decisive influence on the allocation of resources and on their prices” (p. 3).

⁴⁶ More precisely, Regulation 2017/2321, Art 1 also specifies three other possible ‘significant distortions’, namely i) the lack, discriminatory application or inadequate enforcement of bankruptcy, corporate or property laws [which is rather broad] ii) wage costs being distorted and iii) access to finance granted by institutions not acting independently of the state.

⁴⁷ See Prusa (2017) for a critical and informative contribution on double remedies.

⁴⁸ See SWD(2017)483 final/2 of 20 December 2017, On significant distortions in the economy of the P.R. of China for the purpose of trade defence investigations, a report of no less than 466 pages! (see trade.ec.europa.eu/doclib/docs/2017/December/tradeoc_156474.pdf).

8. Market access in agriculture: Tariffs and tariff-rate quotas

This chapter deals with agriculture, where both tariffs and TRQs matter. After a short analysis of trade flows in this sector (8.1), tariff profiles at various levels of disaggregation are presented (8.2), tariff peaks are studied at the 2-digit sector level as well as at the 6- and 8-digit tariff line level (8.3) and TRQs are dealt with in the main text and in Annex I. TRQs (and their enlargement) can be a difficult negotiation issue but in the case of China, this is less likely; the EU side of TRQs is far more complicated, however.

Table 8.1 Weighted MFN applied tariff rate at the HS 2-digit level (%)

	Overall	Agro-food	Industry
China	9.30	12.27	8.02
EU	4.76	6.90	3.83

Note: Agriculture includes products 1-24, 35, 43, 51 and 52.

Source: Authors' own calculations using data from the World Integrated Trade Solution (WITS).

Looking at the averages of weighted⁴⁹ MFN applied tariff rates (Table 8.1), *agriculture* is a protected sector for both economies. Besides the concerns related to food quality, which are present in every country, China has long pursued a strict policy of *food self-sufficiency* that allows the government to decide on prices and quantities in order to protect both citizens and farmers from price fluctuations or shortages. What matters for agriculture is a verification of whether and in what agro-products the Chinese tariff protection and TRQs are actually hitting potential export products from the EU. It is interesting to foresee which of the two parties will play defence and which offense. One question is whether China is willing to drop its strict policy of food self-sufficiency and to expose its farmers more to international competition. Still, the ongoing structural change in Chinese society towards higher quality goods rather than quantity (due mainly to the evolution of the Chinese diet) could be a focal point of the negotiations. Indeed, the EU seems eager to have access to the Chinese food market, exporting the quality and safety standards sought by China, as it is already doing selectively (e.g. some fruit exports now banned by Russia have found their way into China, such as pears).

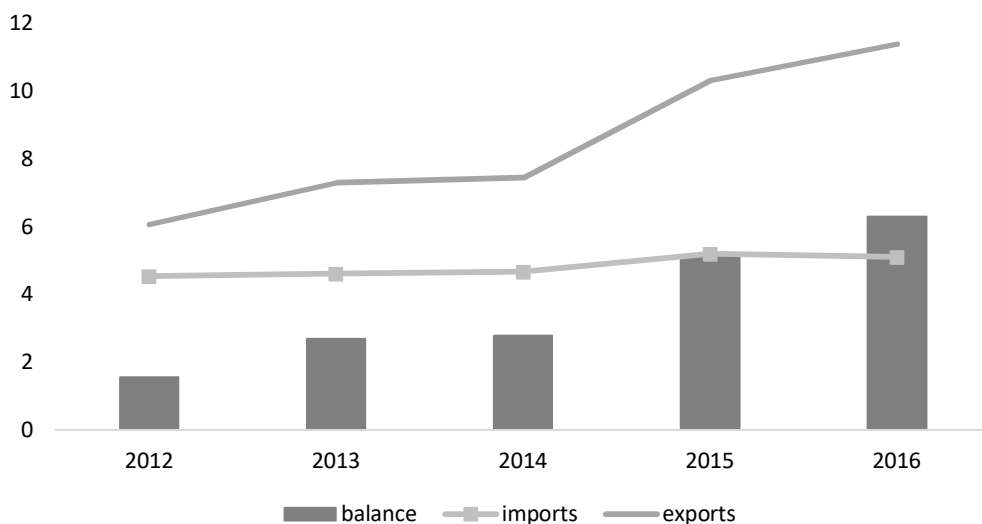
8.1 Bilateral agro-food trade and its composition

The overall increase in living standards of the Chinese population, led by a successful middle class, will modify the Chinese demand for all kinds of goods in general, but food is likely to be the first affected. Possible evidence of this ongoing trend towards high(er) quality food in Chinese demand can be found in the positive trade balance that the EU enjoyed in 2012 for the first time since 2002 (Figure 8.1). European exports grew steadily

⁴⁹ Weights are the corresponding trade values. Note that, as before, tariffs are MFN applied tariffs, not the bound tariffs (if different).

until 2009, when the pace dramatically increased, and this pace of EU agro-food exports increased even more after 2014. Meanwhile, European imports from China have not declined, aside from the drop in 2009 owing to the start of the European crisis, but rather have remained flat since 2012.

Figure 8.1 EU trade balance with China in agro-food (€ billion)



Note: The Agricultural Products (AMA/WTO) classification is used.

Source: Authors' calculations using DG Trade (2018).

This path points to an emerging complementarity between the two economies, where China has finally obtained a sufficient level of income per capita to purchase high-quality products. Thus, the EU may seize the opportunity to become a significant player in the future Chinese agro-economy, and EU agro-products have all the right features to make it possible. What needs to be taken into account, however, is competitive supply from Australia and New Zealand (both having FTAs with China). Table 8.2 reports the shares of the eight most traded agricultural products, in descending order of importance, aggregated at the 2-digit level. The only product present in both exports to China and imports from China is fish, which leads in total trade (10.7%) and in imports from China (17.4%). Of the remaining most traded products, European exports dominate, with beverages (8.4%) and preparation of cereal (7.1%) at the top for total bilateral trade.

Table 8.2 Most traded products in agro-food, 2014

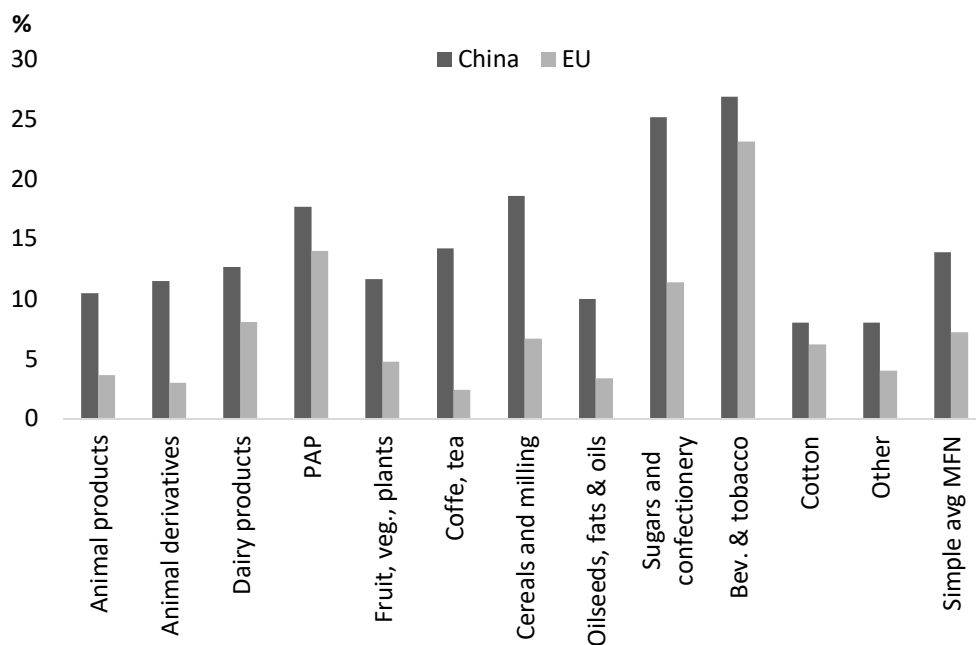
Total trade		EU exports to China		EU imports from China	
HS code and name	Share (%)	HS code and name	Share (%)	HS code and name	Share (%)
03, Fish	10.7	22, Beverages	15.7	03, Fish	17.4
22, Beverages	8.4	02, Meat	12.1	05, Prod. of animal origin	8.0
19, Prep. of cereal	7.1	19, Prep. of cereal	11.9	07, Edible veg.	7.4
02, Meat	6.5	41, Raw hides and skins	10.3	51, Wool	6.8
04, Dairy products	5.8	04, Dairy products	9.5	20, Prep. of veg.	6.4
41, Raw hides and skins	5.8	43, Fur skins	6.6	12, Oil seeds	6.3
05, Prod. of animal origin	5.3	03, Fish	4.6	52, Cotton	6.3
51, Wool	5.0	35, Albuminoidal substances	4.3	09, Coffee, tea	6.0

Source: Authors' calculations using WITS.

8.2 Tariff and TRQ barriers in bilateral agro-food trade

Tariffs in agriculture are higher than in industry for the above-mentioned reasons related to *food security* and *protection of domestic farmers*. Nonetheless, as shown in Figure 8.2, the European simple duty averages are mostly concentrated around the relatively low threshold of 5%, except for dairy products (8.1%) and processed agricultural products (PAPs) (14.0%), where the EU has a strong comparative advantage, and for sugar and confectionery (11.4%) and beverages & tobacco (23.15%), which have always been highly protected products worldwide. China levies rather high applied MFN rates on all its agricultural goods, thereby keeping its primary sector rather closed.

Figure 8.2 EU and China simple applied tariff averages in agro-food, 2014



Note: HS 2-digit codes: Animal products 01, 02, 03, 05; animal derivatives 35, 41, 43, 51; dairy products 4; PAP 16, 19, 20, 21; fruit, veg., plants 06, 07, 08, 13, 14; coffee, tea 9; cereals and milling 10, 11; oilseeds, fats & oils 12, 15; sugars and confectionery 17; beverages & tobacco 22, 24; cotton 52; other 18, 23.

Source: Authors' own calculations using WITS.

8.2.1 Agro-food in China's FTAs

China has shown an increasing willingness in recent FTAs to gradually open up its agricultural sector. Starting with the FTA with Chile (2005), although agricultural products were still subjected to high initial tariffs (equal to or higher than 20%) and long phase-out periods (ten years), and thus made the FTA less ambitious with respect to agriculture, the eventual tariff removals turned out to have a great impact on two-way agro-food trade between the economies. In fact, though agro-food products count for a small part in total bilateral trade (5.1% in 2014), they registered an average annual growth rate of 21.6% between 2006 (\$366 million) and 2014 (\$1.755 billion), outperforming industrial goods, which grew on average by 16.8% per year.⁵⁰

In the FTA with New Zealand (2008), China has been more inclined to lower agricultural tariffs, but maize, sugar, forestry, wool and cotton were excluded, as for Chile. Moreover, China also introduced a *country-specific* TRQ on Indonesian(!) imports of wool equal to 25,450 tonnes (of which 450 tonnes are of wool tops), which grew

⁵⁰ Total trade increased from \$9.6 billion in 2006 to \$33.9 billion in 2014. Calculations refer to the sum of Chile's imports from China and exports to China. Products are disaggregated at the HS 2-digit level and are sourced from WITS.

annually by 5% for five years.⁵¹ The trade relationship between the FTA partners strengthened over the years after the agreement and the two-way trade exploded, registering a 252% increase from 2009 to 2014.⁵² As a result of the more ambitious tariff cuts in agriculture compared with the Chilean FTA, the share of agro-food in total trade escalated from 25.9% to 40.9% in the same five-year period. As happened with Chile, agricultural goods enjoyed the largest growth, at 31.8% on annual average.

8.2.2 *Agro-food in the EU's FTAs*

Mexico (2000) has the first FTA signed by the EU with a non-European OECD country,⁵³ in which many agro-goods had to follow long phase-out schedules. In fact, while only 43.1% of agro-food imports from Mexico enjoyed a zero EU tariff in the year the FTA went into force, another 33% of them were spread over four, eight, nine and ten⁵⁴ years of phase-out schedules (fish and fish products, and vegetables), and in some cases, they were also subjected to TRQs (e.g. bird's eggs and flowers) or the entry price system (seasonal fruit). The high level of diversification of the tariff liberalisation measures adopted by the EU together with their slow implementation have made the EU-Mexico FTA a low-ambition agreement that has not led to substantial gains in agricultural trade. Bilateral trade of agro-food did not show any growth from 2001 to 2014, at 5.52% in 2001 and 5.10% in 2014. Similarly, both European imports and exports with Mexico have lost importance as a share of total agro-trade, implying that the bilateral market opening for agricultural products was not deep enough.

In the FTA with Chile (2003), the EU went further with tariff cuts as compared with the Mexican example, with 90% of agricultural tariffs on zero-duty in the year after the treaty went into force. The remaining products were subjected to long phase-out schedules (either seven or ten years), including PAPs of vegetables, fruits and meat as well as meat and fish. In contrast with the TRQs agreed with Mexico, in the FTA with Chile all the TRQs (except fish) set a duty-free regime from the date the agreement entered into force. Moreover, some of the quotas increased over the years by predetermined annual rates of either 5% or 10%. In the first six years, the greater liberalisation, compared with the FTA with Mexico, led to an increase of ten percentage points in the share of agro-food imports in total EU imports from Chile (from 22.9% in 2004 to 32.6% in 2009).

The finalised negotiations on CETA, concluded in August 2014, have brought exceptional results in tariff cuts for the overall economy as well as for fisheries and agriculture. The tariff cuts agreed upon by the EU are undoubtedly comprehensive,

⁵¹ See Peterson Institute for International Economics (2016, p. 161.).

⁵² Total trade has increased from \$6.1 billion in 2009 to \$15.5 billion in 2014. Calculations refer to the sum of New Zealand's imports from China and exports to China. Products are disaggregated at the HS 2-digit level and sourced from WITS.

⁵³ Other than South Africa (2000) (not in OECD).

⁵⁴ For the ten-year specific case, the tariff rate remains unchanged for the first three years and a phasing-out schedule for seven years afterward. See Copenhagen Economics (2011).

with 98.7% of all European tariff lines to be eliminated.⁵⁵ Considering agriculture, only 6.2% of agro-food tariffs will not be fully eliminated after seven years. Among these excluded lines, some are products subjected to the *entry price system* (e.g. tomatoes, oranges, apples and grape juice); some have been totally excluded from negotiations (chicken and turkey meat, and eggs); and for others, the TRQs have been set to guarantee duty-free imports for limited quantities (Table 8.3).

Table 8.3 EU TRQs in CETA negotiations

Product	Agreed CETA quota (tonnes)	Duty-free on existing quota (WTO)
Beef	45,838 + 3,000 (bison)	11,500 (Hilton beef)
Pork	75,000	4,625
Sweet corn	8,000 ^a	-
Common wheat	60,147 ^b	38,853 ^b

^a It will apply upon entry into force of CETA.

^b It will expire once the tariff on common wheat is fully phased out.

Source: Authors' calculations using European Commission (2015b).

While for Hilton beef, bison and common wheat the duty-free amounts will be available immediately after CETA enters into force, a phase-in period of five years has been decided for beef, pork and sweet corn. These TRQs ensure Canada almost 'unique' duty-free access (within the quota, of course) to the protected European agrarian market.

8.3 Tariffs peaks in agro-food

As shown by past FTAs concluded by both EU and China, it is possible to identify sensitive products for both sides. Dependent on the competitiveness of the other party in such goods, this should enable the reader to assess options for an FTA between China and the EU. For agro-goods with relatively low tariffs and no TRQs, liberalisation should be easier, but the question is whether the gains in trade or welfare would be large. It is therefore much more important to focus on *sensitive products*. Moreover, in the specific case of China, an increase in competition due to the entrance of international firms into the market would lead to an overall improvement of choice. Growing international competition generates a so-called 'market selection effect': pushing inefficient and uncompetitive domestic firms out of the market as well as firms mistrusted for quality that is too low. Its short-run effect is always painful, but in the longer run, remarkable gains for the entire Chinese economic system could be generated. In other words, it would make the complicated task that President Xi and the country would be undertaking easier, i.e. transforming the entire economy into a real *market-driven* economy. Yet, there will be opposition to this process. That is why *phase-out schedules*, aimed at conciliating all the different interests, are of extreme

⁵⁵ See the European Commission (2015) article, "CETA - Summary of the final negotiating results" (http://trade.ec.europa.eu/doclib/docs/2014/december/tradoc_152982.pdf).

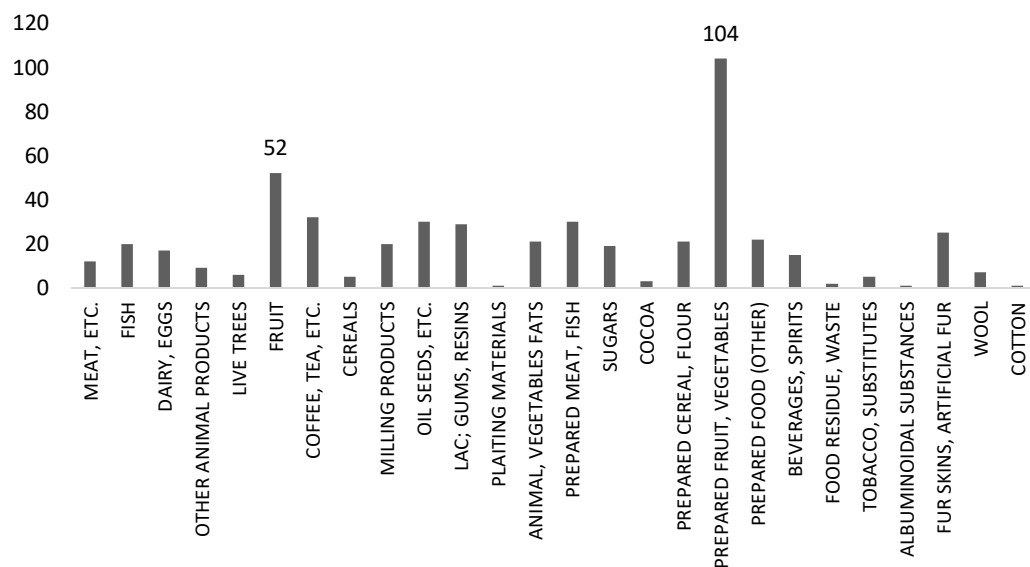
importance in order to smoothly go through the adjustment process and successfully overcome the initial opposition. The focus will first be on sensitive products insofar as they are characterised by tariff peaks and then by TRQs.

Figures 8.3 and 8.4 report the distribution of 8-digit product tariff peaks among agro-food products for the HS 2-digit level sectors for China and the EU respectively.⁵⁶ The reader should be aware that the scale of both axes between the two figures differs, with the European vertical one extending to 500 whereas the Chinese one stops at 120, and the horizontal one being far more inclusive on the Chinese side (i.e. more product sectors). In fact, while the Chinese primary sector is protected in almost all the products (89.7%), the European one reports only ten products characterised by peaks with a marked discrepancy between the top three and the others. Indeed, the most impacted European product, prepared fruit & vegetables, reports a number of peaks three times higher than fish, the second product in descending order, and even more than four times higher than the most tariff-protected Chinese product, which is also prepared fruit & vegetables. Furthermore, all the first three European products register a higher number of peaks than the first Chinese product. In a nutshell, while the EU has adopted a very protectionist policy for a few selected products, China tends to protect its entire agricultural sector, reflecting its historical approach of *food self-sufficiency* and the need to safeguard a farming class far poorer and presumably more under-resourced than EU farmers.

Combining the distribution of peaks in both economies with the distribution of the most traded agro-food products in 2014 (see Table 8.2 above), one might begin to suggest what the priorities would be for the two sides. The European negotiators may focus on PAPs, particularly of meat and fish, and meat products for two reasons: first, to improve the already notable access to the Chinese market of meat (not-processed meat is already second in agro-food exports to China, with a share of 12.1% in 2014) towards new high-quality products, and second, because European countries have a strong comparative advantage in PAPs worldwide. The Chinese prepared meat, fish category (HS 16) reported 30 peaks in 2014, which was a high number but is still only a third of the number for prepared fruit & vegetables (HS 20). Thus, PAPs of meat and fish would probably be those of interest for the EU among the four PAP categories (HS 16, 19, 20 and 21) used in Figure 8.2. The second reason, and probably the more important, is the ongoing shift of the Chinese diet towards more meat, given the steady increase in income and the worsening condition of historical agricultural lands caused by climate change. China, for its part, will certainly demand lower EU protection for fish, which is the top traded product in bilateral agricultural trade and the leading EU import product from China, despite 144 EU tariff peaks at the 8-digit level.

⁵⁶ Calculations refer to the data on the *number of peaks* reported by WITS, which report the 8-digit lines of a 2-digit category with a duty above 15%. In Figure 8.3, the EU is the partner and China is the reporter, the opposite of Figure 8.4.

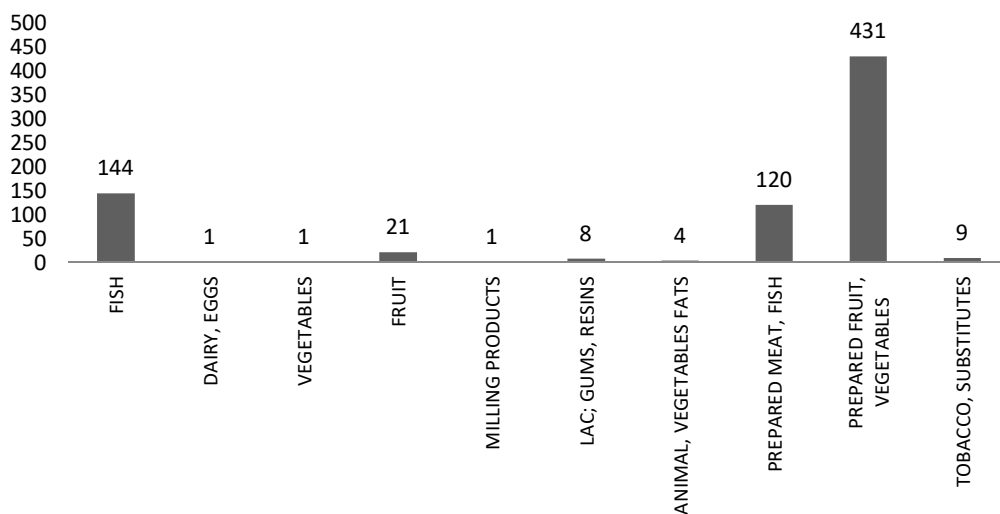
Figure 8.3 Chinese peaks (MFN applied duty > 15%, 8-digit lines) in agro-food classified at the HS 2-digit level, 2014



Note: Agriculture includes products in the HS 2-digit classification from 1 to 24, 35, 43, 51 and 52.

Source: Authors' calculations using data from WITS.

Figure 8.4 European peaks (MFN applied duty > 15%, 8-digit lines) in agro-food classified at the HS 2-digit level, 2014



Note: Agriculture includes products in the HS 2-digit classification from 1 to 24, 35, 43, 51 and 52.

Source: Authors' own elaboration using WITS.

Investigating at the 6-digit level, Table 8.4 shows that China imposes duties above 15% on 13.89% of all its products, a share seven times higher than the European equivalent. However, if one considers agriculture alone, this high ratio in terms of share shrinks to only twice as high and is reflected in the value traded under peak rates: almost the same

between the two sides, with China importing goods from the EU for \$1,183.6 million and the EU registering \$919.8 million of imports from China.

Table 8.4 China and the EU's peaks (>15%) at the HS 6-digit level, 2014

	China			EU		
	No. of lines with simple applied MFN avg >15%	Sector relevance (%)	Import value (\$ million)	No. of lines with simple applied MFN avg >15%	Sector relevance (%)	Import value (\$ million)
Agro-food	171	23.88	1,183.6	80	10.06	919.8
Industry	455	12.00	29,604.0	14	0.35	7,017.4
Total	626	13.89 ^a	30,787.7	94	1.97 ^b	7,937.2

^a China reports 4,507 6-digit lines of which 716 are agricultural and 3,791 are industrial.

^b EU reports 4,761 6-digit lines of which 798 are agricultural and 3,963 are industrial.

Notes: Agriculture includes HS 2-digit products 1-24, 35, 41, 43, 51 and 52.

Source: Authors' calculations using data from WITS.

Another consideration is the distribution of the 6-digit lines, identified in Table 8.4, over the duty rate spectrum. Whereas 60% of all EU 6-digit lines are in the range of between 15% and 20%, for the Chinese the figure is only 17% in the lowest interval, and a more important share of 35.88% is in the considerably higher range of 25–35% (Table 8.5).

Table 8.5 Distribution of peaks (6-digit level) among duty ranges in agro-food (%), 2014

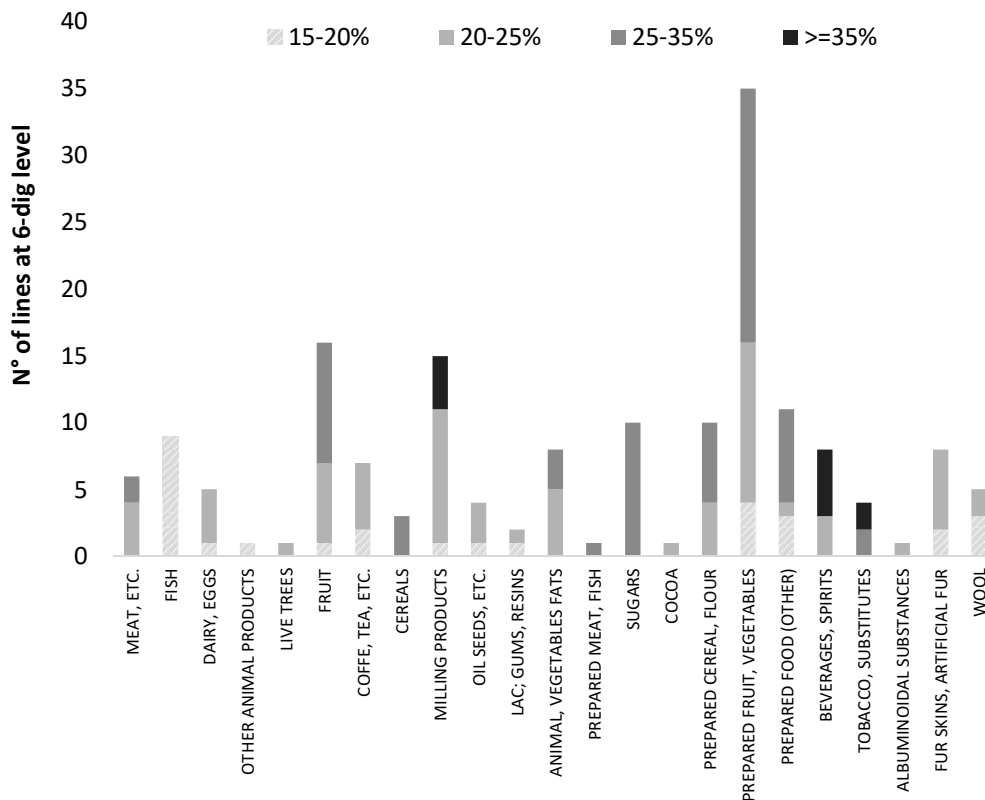
	15-20	20-25	25-35	≥35
EU	60.00	28.75	7.50	3.75
CHINA	17.06	41.18	35.8	5.88

Note: The upper bound value of each range is excluded.

Source: Authors' own elaboration using data from WITS.

Hence, the question is whether a negotiation can successfully tear down these high duties, and thus shrink the numbers in the two main ranges for Chinese duties (i.e. 20–25% and 25–35%). Furthermore, the sectors that would interest European negotiators the most, such as PAPs, meat and beverages, are characterised by Chinese duty averages higher than 25% (Figure 8.5).

Figure 8.5 Distribution of Chinese peaks (6-digit level) by product and duty range, agro-food, 2014



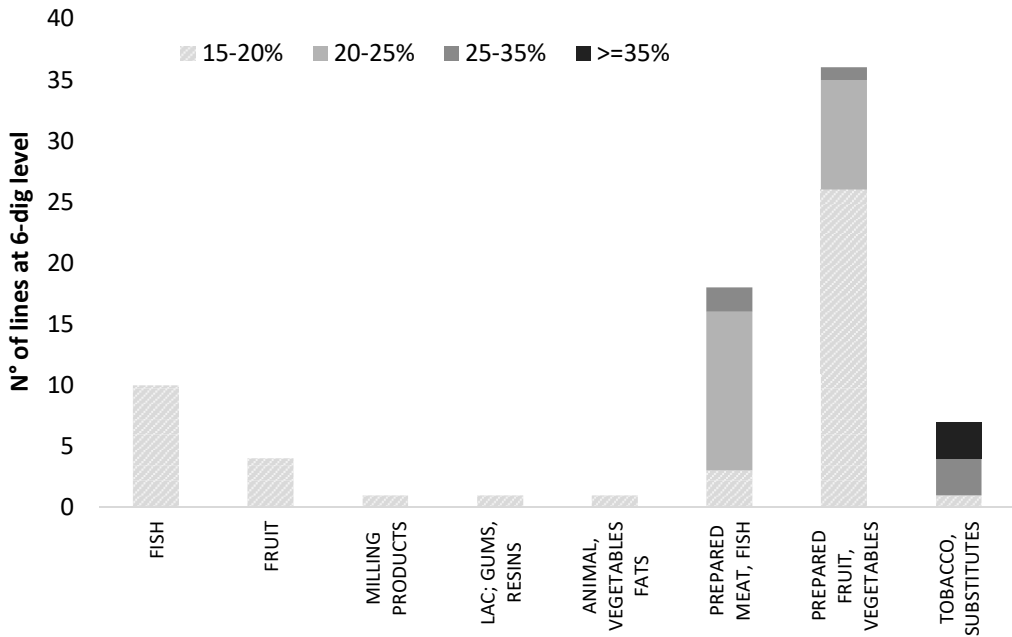
Source: Authors' calculations using WITS.

A complete elimination of these tariffs from the Chinese side seems improbable, certainly not within a short period. A reasonable way out could be the concession of a *special quota* for the EU (as has been the case for wool in the FTA with Indonesia) with a preferential duty and based on annual increases over a number of years. For its part, China would likely ask the EU to remove tariffs on fish, which are already below the threshold of 20% (Figure 8.6), perhaps with a long phase-out schedule.

A final matter of concern is the product lines at the 6-digit level that register simple averages slightly below or equal to 15%, and that in this way do not fall into the category of peaks. Once again, China outperforms the EU with 63 lines against only 9 European, with an MFN applied duty rate included in the range of between 14.5% and 15%. Interestingly, the greater part of these Chinese lines is in PAPs, and they are spread among meat, fish, vegetables, fruits and cereals.⁵⁷ On the other side, 7 out of 9 European lines concern fish, which is the most imported European good from China (see Table 8.2 above).

⁵⁷ Specifically, they are 27 lines (2014): 9 lines in HS 16 prep. meat, fish; 7 lines in HS 19 prep. cereal; 7 lines in HS 20 prepared fruit & vegetables; and 4 lines in HS 21 prep. food (other).

Figure 8.6 Distribution of European peaks (6-digit level) by product and duty range, agro-food, 2014

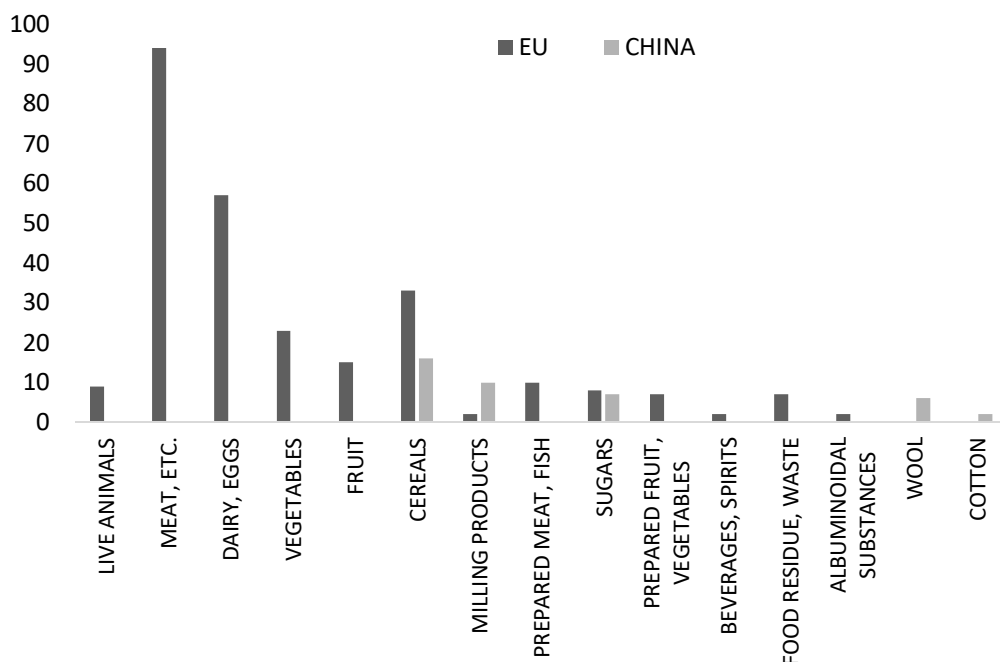


Source: Authors' calculations using WITS.

8.4 Tough barriers: Tariff rate quotas

Another point to be addressed is the liberalisation of tariff rate quotas (TRQs), i.e. their removal or at least a significant enlargement of duty-free volumes. In fact, the relevance of TRQs in the present FTA discussion depends on whether the protected goods are potential export products for the other party. In the case of EU-China, this is not often applicable. Figure 8.7 plots tariff lines at the 8-digit level subjected to TRQs grouped in their respective 2-digit categories. First, the number of EU TRQs is much higher than those of China: 269 against 47. Second, comparing the product groups at the 2-digit level in which these lines fall, the two economies share only three categories: cereals, milling products and sugars. Thus, the two structures of TRQs do not hinder each other, and above all, they do not involve the main exported products of the counterpart of the FTA. Indeed, the Chinese quotas would not seem to be a priority item of discussion for European negotiators as the EU is hardly a major producer, let alone an exporter of rice or cereals and certainly not of wool and cotton. The case of sugar is more complex, but to call the EU a major would-be exporter is surely wrong. Moreover, more competitive suppliers might already enjoy good market access to China. The EU might have to concede preferential TRQs for Chinese imports, probably on vegetables (HS 07), which were the third most imported product by the EU from China in 2014 with a share of 7.4%. This because neither fish (HS 03) nor products of animal origins (HS 05), the first and second EU imports from China, are subjected to European TRQs.

Figure 8.7 Distribution of 8-digit lines subjected to TRQs



Source: Authors' calculations based on WT/TPR/S/300 China and the Tariff Analysis Online (TAO) facility of the WTO.

Whereas the Chinese out-of-quota tariffs are all *ad valorem* (Table 8.6), the European scheme is far more complicated, as it either reports *ad valorem* tariffs, or specific tariffs (€ per ton or hl) or a combination of both (see Annex I, European TRQs).

Furthermore, European lines at the 8-digit levels are often grouped in the same TRQ specification, creating overlapping in-quota quantities between products' aggregation at the 4-digit level.⁵⁸ This happens also in the Chinese TRQs for wheat, corn and rice, in which categories HS 10 and 11 share quantities, but the more homogenous definition of duty and quantity among the 8-digit lines makes Chinese TRQs easier to understand than the European ones. Finally, some European out-of-quota duties are seasonal, meaning that the specific tariff may change depending on the time of year (e.g. high-quality oranges in HS 0805).

⁵⁸ For example, the "High quality meat of bovine animals, fresh, chilled or frozen" TRQ groups together fresh and frozen meat, but they are in HS 0201 and 0202 respectively. Hence, the assigned in-quota quantity of 37,000 tonnes has to be split between the two consecutive categories.

Table 8.6 Chinese TRQs

Products	Number of lines	Out-of-quota rates (%)	In-quota rates (%)	Tariff quota quantity (tonnes)	In-quota imports (2011)	In-quota imports (2012)
Wheat	7			9,636,000	1,258,00	3,701,000
Wheat and meslin	4	65	1			
Wheat or meslin flour	1	65	6			
Groats and meal of wheat	1	65	9			
Pellets of wheat	1	65	10			
Corn	5			7,200,000	1,754,000	5,208,000
Maize seed	1	20	1			
Maize other than seed	1	65	1			
Maize flour	1	40	9			
Groats and meal of corn	1	65	9			
Pellets of corn	1	65	10			
Rice	14			5,320,000	598,000	2,369,000
Rice	10	65	1			
Rice flour	2	40	9			
Meal of rice	2	10	9			
Sugar	7	50	15	1,945,000	1,945,000	1,945,000
Fertilizers	3	50	4*
Wool	9			287,000	287,000	287,000
Wool, not carded or combed	6	38	1			
Wool, carded or combed	3	38	3			
Cotton	2	40	1	894,000	894,000	894,000

* Interim duty applied at 1%.

(...) Not available.

Source: Authors' own elaboration using WT/TPR/S/300 China.

Nevertheless, TRQs are not always binding, that is, the quota filling rates of some sensitive products in the EU's TRQ list for 2011 and 2012 are not always close to 100%.⁵⁹ The wide spectrum of filling rates might be encouraging for negotiations as possible concessions to China can focus on products with high filling rates and enough weight in the Chinese export basket. For instance, among the lines concerning rice imports, only husked (brown) rice and broken rice do not totally fill the quota, so the EU might set a preferential quota for the import of rice from China. In summary, negotiation on TRQs will probably mainly focus on concessions from the EU side, both because Chinese TRQs only marginally affect EU exports, and because the quantity limitations set by the EU are not always completely used, so negotiations can focus on those few specific lines with high filling rates that are of interest for Chinese exports.

In the EU-China agro-food trade, there are many opportunities to expand trade and hence consumer choice.

- a) China is gradually reducing its strict self-sufficiency policy, as shown by recent import growth and significant concessions in recent FTAs. Also EU agro-food exports to China have been rising rapidly ever since 2009 and enjoy a positive trade balance.
- b) The EU has – overall – lower tariffs and far fewer tariff peaks in agro-food than China. China's tariff peaks are also higher than the EU's, on average.
- c) In TRQs, however, it is the other way around: China has relatively few and simple, transparent TRQs, often in sectors in which the EU is not an exporter. The EU has many TRQs and the in-quota rates and the beyond-quota rates are complicated, with some being seasonal as well (the entry price system). Only in cereals, milling products and sugars do both economies employ TRQs.
- d) Rapid income growth, especially in the growing middle class, is helping to slowly alter the Chinese diet towards more meat and a search for higher quality and safe agro-food products. This enlarges the potential for the EU, as its farmers and producers are widely known for quality and a credible food safety system.

⁵⁹ Derived from WTO documents G/AG/N/EU/12, 13 December 2012 and G/AG/N/EU/16, 14 November 2013. Looking at edible vegetables (HS 07), most of the products (i.e. potatoes, tomatoes, carrots and turnips and sweet peppers) reached the threshold of in-quota imports, whereas dried onions registered filling rates of 56.75% and 56% for 2011 and 2012 respectively, and sweet potatoes (other than for human consumption) only reached 12.42% (2011) and 11.22% (2012). Notably, imports of manioc are basically always duty free due to the huge amount allowed in-quota. Within fruits (HS 08), while sweet oranges and apricots register filling rates equal to (nearly) zero, European imports of cherries filled around 20% of the quota restriction. Finally, a filling rate that strongly fluctuated between the two years has been that of lemons, decreasing from 94.59% in 2011 to 40.34% in 2012.

9. Technical barriers to trade

9.1 Mapping bilateral TBTs and their scope

Technical barriers to trade are consistently identified by business as a major, if not the major, obstacle to cross-border trade. As a group, they are an important non-tariff measure (NTM), besides other regulatory barriers, such as differences in and controls of SPS measures on food, feed and plant health (see chapter 10) and disparate requirements in services trade and investment. TBTs consist of three types: differences in technical standards, differences in technical regulations and differences in or non-recognition of conformity assessment (through certification, inspection, pre-market type approval, etc.) and its accreditation. Technical standards are voluntary by definition, as the WTO TBT Agreement and its annex prescribe, following a century-plus old tradition of standardisation. Nevertheless, differences in (voluntary) standards can cause barriers for several reasons, such as reference in insurance contracts, incompatibility or interoperability questions, adaptation of intermediate products in global value chains, or a later reference of a local standard (say, deviating from an ISO or IEC one) in a national law. Technical regulations and (most of) conformity assessment are about mandatory requirements, which can be costly if different between trading countries. Since there are many WTO partners, if all were to make up their own technical mandatory requirements in every technical detail, it is likely that they would all differ somewhat or sometimes very much, and the costs of goods trade would become very high. A fundamental principle, which follows from 'better regulation', is for countries to define first their health, safety, environmental and consumer protection *objectives*, as a form of reducing risks to levels acceptable to society, if the marginal costs are not too high. Given these objectives, the technical *instruments* to pursue these objectives can be left to standardisation bodies, as long as the objectives are assured. Increasingly, such standards can be internationalised, not only in the EU/EEA but even at world levels, that is, world standards from IEC/ISO wherever possible, or from recognised world consortia in, say, ICT goods and services.

The justified reason to regulate (the market failure of risks that are too high for, e.g. safety) is in line with the WTO TBT Agreement, whereas the technical requirements will be sufficient to support these objectives (in most cases) and certification can then confirm that these standards have actually been used in products or components, and thus the latter are safe. The third track, that is, conformity assessment, is also more and more internationalised through (ISO) accreditation standards, private high-standard networks for accreditation (e.g. International Laboratory Accreditation Cooperation (ILAC) and the IECEE-CB)⁶⁰ and its recognition and mutual recognition agreements (MRAs) such as in APEC, between the US as well as Canada and the EU and some other instances.⁶¹ While the EU is a frontrunner in this area (also due to its own history of building up its single market), China is only beginning the process of

⁶⁰ IECEE-CB refers to the System of Conformity Assessment Schemes for Electrotechnical Equipment and Components.

⁶¹ See Correia de Brito, Kauffmann & Pelkmans (2016) for an extensive survey of MRAs.

internationalisation of its systems and hence the lowering of TBTs through this 'global' route. However, the EU is – given its own internal history of the single market – well placed to support China in this transition and stimulate the country to reduce bilateral TBTs as quickly as possible, while internationalising its system, principles, standards, accreditation and certification.

There are no systematic empirical studies on TBTs as an access barrier to the Chinese market or, for that matter, to the EU market. There is quite some work on TBTs as a barrier to the EU market (mainly from work by the US and Japan, but again largely complaints-based). The WTO Trade Policy Reviews – for large traders like the EU and China, every two years – provide useful information but the relevant sections in these reports do not easily add up to a systematic survey. These difficulties about TBTs are inherent to the subject area, which is intrinsically resistant to attempts to measure the costs over many tens of thousands of goods and services. The selective information is nonetheless quite rich and is presumably useful for trade negotiators. Of course, the WTO has long established a notification system under its TBT committee and this has generated a dataset about TBTs, in the simple sense of (here, Chinese or EU) measures notified. One should realise that TBTs are inevitable in a world economy where all countries conduct risk regulation, that is, regulation to reduce risks in health, safety, environment, financial markets (prudential and financial stability) and consumer protection, all market failures that justify regulation in principle. This means that equating TBTs with any measure notified to the WTO TBT committee might be formally correct, but it is not productive or useful as such.

What matters is first whether the WTO TBT principles have been adhered to, when regulating, and second, whether the 'trading costs' of such a TBT for market access are the lowest possible, without affecting the (national) objectives of lowering specific risks. Although China has only begun notifying since (late) 2001, whereas many WTO members have done this since 1995, it is remarkable that in early 2016, China had by far the highest number of TBT measures of all Asian countries: 1,118.⁶² The next two are Japan (728) and Korea (691). What makes the Chinese number even more impressive is the fact that TBTs (resulting from new regulation) are, to some extent, a product of the level of development, because people tend to become more risk averse when becoming richer. China, however, is surely not the richest country in Asia and has a lower income per capita than for example, Japan and Korea, yet it has notified far more. This record might suggest that TBTs may well be a significant issue in ordinary trade relations and a crucial element in an FTA. Moreover, the 'specific trade concerns' with respect to such Chinese TBTs the EU has raised in the WTO are as high as 40 (on 19 notified measures) by 2015, higher than those raised by WTO partners, including the US. The EU, on the other hand, notifying since 1995 and highly developed, has 917 TBT notifications, some 200 fewer than China. However, EU member states have also notified such measures (presumably, where national competences remain) but it is

⁶² There are, however, persistent complaints that China has failed to notify all relevant measures.

anything but clear what the status is of many of such measures.⁶³ China has filed 26 specific trade concerns about EU TBT notifications, related to 16 measures.

Section 9.2 complements the empirical analysis in economic studies and CGE simulations, like that in part III of this study, by the nitty-gritty reality of TBTs for numerous goods or services in markets every day. Nowadays, economic studies on trade barriers typically employ AVEs (ad valorem equivalents) for the costs of TBTs that exporters incur on top of the (CIF-inclusive) invoice presented to importers in the destination market. AVEs are not directly measured but estimated with the help of various econometric methods. Estimating AVEs with some degree of reliability is so difficult that, until (say) a decade ago, trade economists simply did not invest in such attempts. Indeed, it is perhaps as much an art as a mature and fully developed economic technique (Bergsten, Hufbauer & Miner, 2014) and the data requirements are most demanding, often simply beyond what is possible to obtain (e.g. Berden & Francois, 2015). AVEs are employed in Part III of this volume and it is therefore worthwhile to inform the reader about the meaning and robustness of these TBT cost measures. This is done in Box 19.1 in chapter 19.

Section 9.2, instead, attempts to review the collected evidence at the micro level on TBTs in goods, for both China and the EU. We use several sources for this review.⁶⁴ Section 9.3 deals with the intended transformation of the Chinese system of technical regulation, standards and conformity assessment. This reform is a typical product of the profound transition the Chinese economy is undergoing, to leave behind the legacies of the planned economy and support in market-driven ways the competitiveness of its enterprises, innovation and market openness in a stimulating and not throttling or over-controlled and rigid fashion. It is also crucial for Chinese exports with greater value added in value chains and outside them. For the EU, this huge reform process, an overhaul really, offers many possibilities to reduce TBTs and greatly facilitates the present and future openness of the Chinese market. It is therefore relevant for a possible FTA and for constructive, intensified cooperation. A first summary of this reform with a tentative assessment is provided. Section 9.4 provides a few inferences, including some remarks on the contrast between the TBT chapters in the recent China-Korea FTA and the EU-Vietnam FTA as a signal for 'reading' the preparedness of China to upgrade FTAs in this respect.

⁶³ Thus, one suspects that many older EU country notifications might well have become irrelevant with newer EU-wide regulation or referred standards, but it is impossible to know how much. Moreover, notification practices by EU countries would seem to differ enormously: whereas a number of EU countries have notified fewer than 50, France (228) and notably the Netherlands (615!) have been very active.

⁶⁴ Sources include WTO information contained in the two-yearly TPRs on China and on the EU, information in Commission documents on EU-China trade, and the 2015 and 2017 Annual Position reports from the European Chamber of Commerce in China.

9.2 TBTs between China and the EU: Empirical evidence at sector and product levels

Section 9.2.1 introduces the Chinese regulatory, standards and conformance system, which is different from that of the EU. It is currently subject to a major reform, however, which will be discussed later. Without elaborating too many details, it is crucial to realise that China is emerging from a state-run planning system with strong top-down properties, and – initially – with a high degree of isolation. Two decades ago, Chinese exports of goods were largely still produced in the many export-processing zones, without much of a link with domestic standards or rules; these goods were produced on the basis of standards of the multinationals or value chains involved or the regulations of the target markets (or both). At first, the domestic regulatory system was not deeply affected by it. With greater openness and in the run-up to WTO membership, this started to change, but the regulatory and standards system did not immediately follow Chinese integration into the world economy. The sketch of the system until today, in section 9.2.1, is later followed in section 9.2.3 by a discussion of the belated but massive reform – initiated in 2015 – towards a more market-driven and unified system. Following the description of today’s system and a brief comparison with the EU, section 9.2.2 sums up the qualitative evidence on TBTs between the two economies.

9.2.1 *Contrasting China’s risk regulation system with that of the EU*

The most important contrast between the EU risk regulation system and that of China is the overwhelming role of the state in many manifestations. It begins with the terminology. In the tradition of the ISO/IEC and the annex to the WTO TBT Agreement, a standard is by definition voluntary and is, as a rule, agreed by market players, albeit after open and public inquiry or consultation.⁶⁵ The fundamental idea behind it is that market adoption is a matter of whether markets, including consumers, actually prefer the standard or not. Many standards help the market to function better and hence such standards are quickly embraced by companies and consumers. But there is no need or duty; the market will decide. Numerous standards are not promulgated for aspects of risk regulation but rather for technical aspects of market efficiency, technical terminology, removing redundancy, assuring interoperability, compatibility, (defined) quality or best-practice testing of performance. Some 20,000 of the 25,000 European Committee for Standardisation (CEN) and European Committee for Electrotechnical Standardisation (CENELEC) standards have nothing to do with regulation and governments are not involved at all. And markets determine whether an agreed standard is actually ‘adopted’ in practice.

Standards bodies are private (often non-profit) organisations, supported and largely financed by business. In the EU, of the more than €1 billion direct costs of writing standards by CEN, CENELEC and European Telecommunications Standards Institute (ETSI), around 95% comes from industry. When risk regulation (that is, a mandatory

⁶⁵ Moreover, it is well understood that standardisation is subject to anti-trust discipline (in the EU, there is an exemption under conditions and a memorandum of understanding with standard bodies; now also Regulation (EU) No. 1085/2012).

requirement) is at stake, a balance is sought between EU regulation and voluntary standards, if the risks are not too high. On the one hand, there is the public interest of overcoming market failures like (too high risks for) safety (etc.) through the state-regulated objectives and procedures for conformity assessment as well as supervision, and on the other hand, in order to serve the health or safety (etc.) objectives the technical formulation of these requirements is best drafted by technical and sectoral experts in (referred) standards by the private standard bodies.⁶⁶ Governments are typically ill-equipped in terms of technical expertise and not in touch with markets for them to assume the function of promulgating standards, which are fit-for-purpose and not more prescriptive than necessary. Only when risks are seen as very high does the prescriptive nature of EU regulation increase. The great advantage of such a market-driven system is its flexibility and far greater capacity to exploit the technical and market knowledge of suppliers and industrial users in thousands of specific product markets, than when the public administration would have to lead and decide technical details.

The Chinese system may move in that direction, but until recently and even at the present time⁶⁷ this is hardly the case. Box 9.1 below explains Chinese terminology inherited from the days of planning. Myriad of state organs are involved in setting technical regulations, including many ministries and a host of special state bodies led by AQSIQ.⁶⁸ The hierarchy reduces standards emanating from technical manuals of enterprises to a residual status, exactly the opposite of what happens in the EU. In 2001, the Standardisation Administration of China (SAC) was established to exercise unified administration over the standardisation work in the country. Meanwhile, China has drastically improved its international networking, now being a member of IEC, ISO, the International Telecommunication Union (ITU) and the Codex Alimentarius. There are confusing signals about how internationalised its 'standards' really are. The WTO (2012, p. 48) reports that, of the 21,400 Chinese national standards, some 46% had been adopted from international standards or advanced foreign standards.⁶⁹ The 2016 report (WTO, 2016, p. 64) notes that at end-2014 no less than 74% of mandatory standards (i.e. regulations) and 75% of voluntary standards were adoptions or adaptations (a loose term) of international standards.

These figures are very high and in tune with the EU approach (indeed, radically different from the US approach, which has low scores in this respect). Yet that is not, for instance, what European business in China conveys: they say that the *actual* adoption

⁶⁶ The crucial difference between the US and the EU here is that US regulators pick what they regard as the most appropriate standard and incorporate it into the regulation (thereby, no longer being voluntary) whereas in the EU, the referred standard remains voluntary and the option exists to request conformity assessment (from a notified body) on the basis of a different technical solution satisfying the EU regulatory objective. In actual practice, business often relies on the referred standard.

⁶⁷ Derived from WTO (2012), pp. 45–49 and the underlying WTO doc. G/TBT/2/Add.65 of 29 January 2002.

⁶⁸ AQSIQ refers to the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China.

⁶⁹ The latter probably refers to standards from a dozen prominent US standards bodies (ASTM, ASME, IEEE, UL, etc.), which have been adopted by markets in many countries. In 2015, the mandatory and voluntary national standards had grown to 31,000.

of IEC/ISO standards in China is still very limited. One explanation for this discrepancy is that, besides national standards, there are some 90,000 ministry (often industry or sector) standards, and an unknown number of local standards (Xu, 2015). Another possible explanation may be found in the considerable fragmentation of the system (with duplications, inconsistencies, etc.) caused by the fact that far too many ministries and other state-related players write standards. If standard A is based on international standards, but one of the 63 ministries(!) involved imposes another one with deviations, the practical effect of internationalisation may vanish. What is unthinkable in the EU is that the large majority of technical committees is found within ministries.

Box 9.1 Standards and risk regulation in China: On terminology and basics

China and the EU do not differ fundamentally on risk regulation in terms of *objectives* for environmental, worker and consumer risk reduction. Because the EU is more developed, its risk objectives are often more demanding, but that is also changing for China as it is catching up. Still, when it comes to technical requirements for those objectives, there are stark differences. The term ‘standards’ is employed routinely, also formally, although such ‘standards’ are not standards as understood in ISO/IEC and the annex to the WTO TBT Agreement, which prescribes the global terminology and practices. Chinese standards can be, and often are, ‘mandatory’, although in ISO terms that is an oxymoron: it is either a standard and hence voluntary (and may or may not be factually used by markets), or it is a technical regulation, and thus mandatory. The latter may, but need not, refer to existing standards as one satisfactory solution for adhering to the requirements of a (say, safety or health or environmental) regulation. This is not merely a matter of labels. Chinese ‘standards’ can be mandatory or voluntary (indicated by adding ‘T’ to the code), but both are usually written or at least approved by ministries (and their technical committees which usually comprise technical experts from industry) or other state organs, albeit increasingly with public consultation.

Moreover, the current Chinese system is confusing and costly (hence, the overhaul as discussed in section 9.2.3). There are many types and names: national standards, ministry or industry or sectoral standards, trade standards, regional or local standards, enterprise standards and national certified reference material (in specific cases). But other terms are encountered as well, especially now that the massive reform has begun, such as ‘group standards’, ‘technology alliance standards’ or consortia standards (e.g. in ICT), ‘organisational standards’, recommendatory standards and ‘public interest standards’.

According to WTO (2016, Table 3.7, p. 65), the large majority of newly approved standards are voluntary (more than 90%). It can hardly be surprising that the great discretion to promulgate standards has led to conflicting standards or undue overlap or inconsistencies, and in any event, complexity that is not necessary. That the state is over-present can be illustrated by the obligation of ‘enterprise standards’ to be registered! In the world economy, the technical manual of an enterprise is normally a closely guarded secret for that company, the basis for its acquired place in the market, the more so if it includes intellectual property. Trade standards are typically developed when there is no national standard (yet) and become null and void once a similar national standard has been promulgated. This term might change in the ongoing reform. Independent (non-state) market-driven standardisation bodies like the CEN, CENELEC and ETSI or their national members, or the hundreds of US bodies, do not exist in China.

The China Association of Standards (CAS) is a nationwide public association of organisations and individuals engaged in voluntary standardisation across China, led by AQSIQ. The China National Institute of Standardisation (CNIS) is a non-profit national research body affiliated with AQSIQ focused on research, some 'fundamental' standards and information activities; however, it is part of the government. If private standardisation bodies might ever emerge as in other WTO countries, they might emerge from sectoral technical committees with industry specialists. However, it would require the state to explicitly withdraw from approval and control of voluntary standardisation, if not linked to objectives of risk regulation. An example is the China Electronics Standardisation Institute (CESI), which now falls under the Ministry of Industry (MIIT). Another route towards market-driven standardisation might emerge via the new category of 'social organisation standards' because there are signs that business associations and chambers of commerce [social organisations] writing such standards with a view to innovation and 'market vitality' [sic!] will no longer need state approval of one kind or another in the near future. It should be noted that foreign (but registered) enterprises can participate in standardisation.

China is closer to global practices in conformity assessment and accreditation. There is no comparable problem of terminology. It would be crucial for CNAS⁷⁰ (and indeed foreign as well as local business in China) to fully recognise global (strict) ISO accreditation standards as practised by members of, for example, the ILAC worldwide. If done, it would also imply greater certainty as well as cost reduction for European business in China. This would also render the APEC-type MRAs in electrical goods and telecoms equipment, for example, more valuable.

The system is gradually improving but in 2014 it was realised that gradual reform is insufficiently effective and beginning to seriously hinder Chinese attempts to capture the higher value-added segments of value chains and to move towards more sophisticated exports or safer/healthier/greener products for China itself. Section 9.2.3 sets out the overhaul of the system that was initiated in 2015.

The CNCA (China National Certification and Accreditation Commission) under AQSIQ is responsible for compulsory product certification in China, with the help of a Compulsory Certificates Certification Catalogue. The Catalogue lists 22 groups and 163 categories of products.⁷¹ The China Quality Certification Centre has 11 branches and over 200 designated laboratories, in China and abroad. CNAS takes care of accreditation (since 2006) and has accredited 4,400 laboratories and 244 inspection bodies. These relatively recent moves boil down to a far more flexible modernisation. The question is whether and to what extent EU conformity assessment bodies can be fully involved in this system, based on ISO accreditation standards and the highly respected ILAC network of world class bodies involved. The EU sector complains that what China calls the testing, inspection and certification (TIC) sector (see chapter 11) has remained relatively closed.

⁷⁰ CNAS refers to the China National Accreditation Service for Conformity Assessment.

⁷¹ These vary from a range of electrical and electronic goods, to power motors, electric tools, telecoms equipment, audio-video equipment, IT technology, safety glass, medical devices, and e.g. toys.

9.2.2 *Empirical evidence on TBTs between China and the EU*

As far as we know, there is a discrepancy between empirical information about TBTs caused by China for European business and TBTs caused by the EU for Chinese exporters or EU importers. Systematic evidence on the latter does not seem to be available.

9.2.2.1 *Chinese TBTs as encountered by European business*

Table 9.1 summarises in a somewhat crude fashion the sectoral data provided in the 2015 Annual Position paper of the European Chamber of Commerce with respect to TBTs, updated with the 2017 Position Paper where relevant. Before doing so, it is good to know that there are also many horizontal problems in the technical regulation, standards and conformity assessment field. These problems often hinder both foreign and Chinese business (although SOEs selectively benefit e.g. in the TIC sector) and can *de facto* create or worsen barriers to market access. The 2017 Position Paper lists 47 horizontal issues in the form of recommendations to China. Such issues include the lack of transparency in some sectors (e.g. medical devices where new standards were only becoming available after they had already become compulsory) and the undue complexity and ‘heaviness’ in combining technical regulations, compulsory certification schemes and administrative licensing. It is still difficult for manufacturers to obtain recognition of their own test laboratories (which increases costs and time-to-market). Now that China begins to write its own standards in view of China-2025 (for ten leading sectors) there is a strong inclination to advocate with trading partners the adoption of its own standards instead of trying to align with world standards – this is the strategy China has developed for 12 countries linked to the Belt-and-Road on the Eurasian continent. It is one thing to persuade the 12 countries to assume the same standards, for BRI to be efficient, it is quite another to attempt to ‘export Chinese standards’ when world standards are available or being drafted. A serious worry of European business is that the IPRs intrinsic to a company’s own enterprise standard are not protected when having to register that standard.

Table 9.1 TBTs as identified by European business in China

Sector/activity	Barrier description	Comment, advice to China
Automotive	<p>Lack of coordination in auto regulation & red tape</p> <p>Measures are often not technology-neutral</p> <p>Restrictions or prohibitions of imports of car components and used cars</p> <p>Enforcement of strict safety test/road tests, helping consumers and levelling the playing field</p> <p>The independent 'aftermarket' is highly restricted and access is difficult, e.g. due to 4S shops (monopoly); original parts suppliers face difficulties and severe IPR issues</p> <p>The overall Chinese mandate to promote NEVs (new energy vehicles) pre-empts access for European cars because the incentives are often solely local for locally produced vehicles; in late 2016 a quota was proposed (8%), which has the effect of seriously disadvantaging foreign automotive business in China</p>	<p>Advice: Set up a single automotive agency for China</p> <p>Act in pro-innovative and not prescriptive ways</p> <p>Liberalise these imports; do not force EU component suppliers to form joint ventures (JVs)</p> <p>Enforce anti-trust and IPRs (see chapter 13), liberalise imports (here, not so much tariffs); note that counterfeiting is widespread (and unsafe!)</p> <p>Establish equal treatment in general, for incentives and in giving out licence plates (good example: Shanghai); the new State Council Doc. No. 5 in promising equal treatment goes directly against the new quota measures for NEVs</p>
Cosmetics	<p>Numerous detailed issues cause TBTs and/or result from a lack of 'national treatment' or a lack of good governance</p> <p>Notification in China is not identical in the country</p> <p>Accelerate the revision of the CSAR (supervision rules/system)</p>	<p>Advice: Introduce urgently a risk-based classification system, advise and focus on high-risk cosmetics, not on over-controlling low-risk ones</p> <p>Establish a modern risk management system</p> <p>Rely more on safety assessment reports for imported (non-special) cosmetics, rather than animal testing</p>
Energy markets	<p>There are market access barriers in power & gas grids (monopolised) and components, too; unequal data availability (e.g. for shale gas) and lack of clarity about whether foreign invested enterprises (FIEs) can participate</p> <p>There is a large list of issues for EU investors in China, but some are linked to TBTs in trade (e.g. clean coal standards, imports of National-V standard fuel supplies and fair competition in the supply chain for energy equipment)</p>	<p>Opening up is a 'domestic' pro-competition issue, an SOE question, and a trade (in goods and services) and FDI issue</p> <p>Some such issues are feared to show up now that China will introduce its own ETS to achieve the targets of the Paris agreement</p>

Health care equipment	<p>Market access problems and a lack of standards on in-vitro diagnostic products</p> <p>Problems in procurement at a provincial level, especially high-value medical devices</p> <p>Lack of 'equal treatment' for JVs and wholly owned FDI; no recognition of medical devices made in China as 'domestic' (!)</p> <p>Urgent need to create a transitional long-run plan for medical device testing in China</p> <p>Harmonisation of Clinical Evaluation Reports between China and the EU would be most desirable</p>	<p>Advice 1: Harmonise document requirements for clinical evaluations with internationally accepted ones</p> <p>Advice 2: China to participate in/join the International Medical Device Regulators Forum (IMDRF), and their test run of regulated product submission (RPS)</p> <p>Advice 3: Base efficiency/quality criteria on the US FDA system; establish a good supply practice & efficient supervision system, in cooperation with the EU</p> <p>Advice 4: Encourage an EU-China health IT expert roundtable</p>
Metals/steel and mining	<p>Address in earnest the enormous (and very costly loss coverage of) overcapacity in steel; this huge overcapacity 'overhang' causes in turn many other 'ugly things', such as below-marginal-costs pricing in China and in the world, distortions (e.g. discriminatory VAT refunds), explicit subsidies, state guarantees (only for SOEs), tax breaks (SOEs), the postponing of measures (e.g. anti-pollution) and letting (efficient) private steel firms in China go broke while protecting SOEs</p>	<p>Not addressing this massive 'overhang' for so long now causes a huge drain on the Chinese economy (for steel alone, it may be some €50-70 billion a year) and cannot but lead to anti-dumping measures all over the world, plus all the distortions, some of which are TBTs</p> <p>Advice 1: Eliminate loopholes (like adding chrome) and equalise VAT refunds</p> <p>Advice 2: Reduce import tariffs and TBTs for steel to expose the market to competition (e.g. quality steel)</p> <p>Advice 3: Encourage fair competition in metals & mining, equalise compliance between SOEs and private (also foreign) firms, give access to metal exchanges, remove guarantees, develop standards for recycling and open up to the foreign advanced technologies of FIEs</p>
(Petro) Chemical	<p>China has a local variant of REACH but with some disproportionate data requirements</p> <p>Green development and chemical safety issues are not well developed</p>	<p>Advice: Adopt the (UN) CLP classification; utilise the Global Harmonised System (GHS) and Good Laboratory Practice (GLP) standards for laboratories & testing</p> <p>Disruptive measures of relocation irrespective of performance</p>
Pharmaceuticals	<p>Market access for medicines can be very problematic and the barriers are - more often than not - both technical and systemic'</p>	<p>Access is also made more difficult by the way the domestic system functions, alongside serious IPR questions</p>

	However, in early 2017 the new regulator (CFDA) Has introduced a series of measures addressing several concerns of EU business in China; China has now also joined the world forum on medicines regulators (ICH) which can be very helpful	Recommendations necessarily very technical with respect to how the system can operate better, more open and more efficiently
Rail	Market access is very difficult due to public procurement issues – the Chinese market is practically closed	Advice 1: Open up rail standardisation to FIEs. Advice 2: Ensure better IPR protection in rail technology
Renewable energy	No transparency in the bidding system On solar, the technical conformance system is not up to the proper fulfilment of the task in independent ways, making access costly or too difficult	Advice: Establish third-party inspection; for high-quality components, set up an acceptance, verification and monitoring scheme; establish a fine-tuned feed-in tariff support scheme for solar PV application
Smart grids	There is no national treatment; there is discrimination of foreign suppliers by restricting them from using the required encryption technologies There is no level playing field for new market actors' access to power systems infrastructure	Advice 1: Link/facilitate domestic/international standardisation work Advice 2: Establish a regular Sino-EU smart-grid platform

Source: Authors based on European Chamber of Commerce in China (2015).

9.2.2.2 *EU TBTs for China's exporters and EU importers*

No systematic information on or analysis of EU TBTs that hinder China in its exports to the EU seems to be publicly available. As a second-best, one can summarise the information published by the WTO in its Trade Policy Reviews on the EU, and in particular where China is explicitly involved. A good deal of this information in Trade Policy Reviews on the EU TBTs⁷² consists of summaries of the EU regime of technical regulations and conformity assessment, and the link with European and world technical standards. Essentially, the relevant TBT information consists of so-called 'specific trade concerns' raised by other WTO partners. In 2013, and apart from a more general concern that SMEs might find the compliance burden of the EU TBT regime so heavy that they consider it an 'unnecessary obstacle' to trade, a list of such specific trade concerns is provided by the WTO (pp. 59-60). Of the 22 items listed, China is a complainant in 12 of them, followed at a distance by 7 for the US. The 12 items include two old ones (one from 1999 on hazardous substances in electronic equipment and one on REACH from 2005). The others touch upon toys, accreditation and market surveillance (a systemic issue, now in Regulation (EC) No. 765/2008), herbal medicinal products, eco-design for air conditioners, falsified medicines, new cosmetics regulation (e.g. an animal testing ban), allergenic limits in children's products, limits for soluble cadmium in toys, measuring/testing the seasonal performance of air conditioners and prohibited/restricted substances in cosmetic products. In the 2015 WTO Trade Policy Review on the EU, no such detailed list is available (p. 55). The newer list contains seven old items, at least three of which (still) involve China (herbal medicinal products, eco-design for air conditioners and falsified medicines). Seven new ones were added. As noted at the outset, this information as such does not tell the reader that much and is not, by definition, linked to the economic definition of a TBT: differences in technical regulations, standards or conformity assessment, and their costs for exporters to obtain market access. The 'specific trade concerns' in the WTO are more a mechanism triggering consultations among WTO partners in the WTO TBT committee, aimed at trying to resolve the matter to the extent possible.

Risky products are also subject, in the EU, to market surveillance and outside border controls by the authorities of the member states, in order to protect consumers, and for the last few years, also professionals and workers. Authorities will take (too) risky or non-compliant products out of the market and report to an EU-wide rapid alert system called RAPEX for dangerous non-food products.⁷³ In this notification system, China's record is not good and this has remained a serious problem for many years. In 2014, China was the source of many RAPEX notifications about products from outside the Union: in total 1,462 notifications, as compared with 66 (for the next non-EU country with notifications, namely, Turkey) and the US with 60. For professional products in

⁷² See WTO (2013), TBT chapter 3.1.8, pp. 57-63; see also WTO (2015), TBT chapter 3.1.8, pp. 50-5550-55; in WTO (2017, section 3.3.1) the text is entirely devoted to a description of the EU system, without any detailed information on TBTs or specific trade concerns.

⁷³ For food and feed products and for plants, it is called RASFF – see chapter 10. The source of RAPEX statistics is the RAPEX annual statistics for 2014 (see www.ec.europa.eu/consumers_safety/safety_products/rapex/reports/docs/rapex_report_2014finalweb_en.pdf).

2014, China also was the focus of an exceptional number of notifications: 37, as against 25 for all other countries together, mainly concerning microbiological and environmental risks. Over the period 2007–14 inclusive, and for consumer products, China (including Hong Kong) alone had consistently more than half of all notifications (including also the intra-EU ones), with 64% in 2013 and 2014. In 2015 the rate fell to 62% and in 2016 to 53%.

9.3 Transforming China's technical regulation, standards and conformity assessment

TBTs with China cannot be understood without appreciating China's transition from a planned to a much more market-driven (yet 'socialist') economy. In the present section, the transition is explained with respect to the triplet of TBT forms: technical regulation, standards and conformity assessment. By definition, this transition is a medium to long-run process. At the same time, this transition itself is part of the overall transition of China from a planned to a market-driven economy.

First, a few remarks on transition with Chinese characteristics. A similarity with the post-1989 process in Eastern Europe is that such countries face a stark choice. One option is to do away completely with the institutions, mind-sets and vested interests of the former regime and system (yet, without a revolution or bloodshed), including the Party in its present power role. The other option is to initiate a long-run reform process 'from within', and explicitly with those having been in power, indeed a monopoly of power, under the *ancien regime*, with the intention of mellowing the mind-sets towards market functioning and reducing the role of the state to that of a regulator and supervisor. It has been analytically shown, and convincingly so, that the former transition (i.e. with a break with the past, including its power structures) requires an exceptionally stable security and regulatory environment (the so-called 'anchor')⁷⁴ and far-reaching consensus in political circles about the sense of direction, even if very painful at first. This observation has often been contrasted with two transition alternatives, one is China two to three decades ago, the other being those Eastern European and Central Asian countries not having an anchor and sense of direction – an anchor typically offered by the EU and its market-driven model. The Eastern European/Central Asian approach has in common that it either failed in transition (Ukraine, for instance) or power structures re-emerged in another form (or both) and transition was imposed with some blend of market and commands, but in any event, the EU was not regarded as an option. Few of the latter countries enjoyed success, although the resource-rich ones of course did better.

The China transition is different. There, the idea has always been that the power structures would remain and that reform had to be gradual, based on trial and error. What Mikhail Gorbachev initiated in the Soviet Union, was strongly resisted as manifestly imprudent or too risky for China. So, private initiative was allowed more and more without ever letting the old state sectors collapse (e.g. SOEs). In welfare terms,

⁷⁴ See for example, Fischer (1998) and Campos & Coricelli (2002), pp. 793-836.

one can theoretically prove that such an approach is initially welfare-improving and Pareto-optimal (Roland, 2000). Another huge difference with the case of China, is its super-export-oriented growth model (exactly at the right time and at first hardly 'inside' the economy but in separate free zones), which was massively successful. By contrast, transition in Europe, even for those countries now having become EU countries, was at first extremely negative in terms of income and jobs adjustment. 'Gradualism in reform WITH mighty success' never seemed to work in Europe (think what Romania went through during the 1990s).

However, the last few years and during the coming years, the Chinese growth model might still shine but somewhat less overall, and not at all in some sectors and regions. China begins to face a similar problem as some other former communist countries did a while ago. Can centralist, all-powerful systems and vested interests, also backed up by a secretive Party system without any rivalry, transform themselves so as to engineer a successful transition towards a market-driven economy, which is fundamentally *not* top-down? One finds numerous examples and indications of how difficult that is. Mind-sets and thinking are heavily biased by a long legacy of communism with top-down instructions, with a strong dose of management-by-speech (from leaders), a conviction (real or not, but practised) that the Party is beneficial for the people (although its input, through-put and output processes are never tested by the people and are largely invisible). There is also a hidden sentiment that markets are inevitable for growth, but at the end of the day, not ideal (just tolerated). It is striking to note the role (or non-role) of 'information', notably data, openness in information, policy papers with analysis and clarification, statistics – all of which are either not produced (clearly with a reason) or produced but kept away from society and the public domain, or are only selectively given out (which could be a lack of national treatment) or simply follow internationally accepted procedures (e.g. WTO and IMF). This entire transition process is further complicated by a(n) (un)healthy dose of nationalism, which has an extremely long tradition in China. The Chinese are negotiators and assume positions in this light. Finally, the country is incredibly large and this adds its own layer of problems as well.

All of these aspects are recognisable in many facets of today's China, and just as well in the transformation of the technical regulation, standards and TIC or conformity assessment regimes.

Once one enters the TIC and standards world in China, familiar aspects compatible with WTO and ISO/IEC are encountered but also the extreme rigidity of the old infamous GOST standards (of the Soviets) and the power-fights of (too many) ministries that act by regulatory command. Nevertheless, the 2013 Third Plenum Party Decision on reforms is impressive in its firm stance on deep reforms in many areas in a market-oriented direction. The European Chamber of Commerce's (2015) report attempts to verify all the specific wording of the Decision in terms of follow-up as well as actually introduced reforms. It expresses doubts, not dissimilar to those referred to above. Also, Commissioner Malmström (2016) alluded to the so far disappointing reform record. Overhauling systems and institutions is exceptionally difficult, harder still when emerging from communism, and China is no exception.

In technical regulation and standards, a triple-staged reform was proposed in 2014–15 by the SAC, backed up by the State Council (China's central government). If we are to take literally the words in these reform proposals, the Chinese reform is going to be wide-ranging and impressive. It is bound to affect existing TBTs in many ways directly, while probably affecting the way ISO/IEC will work in the future as well. Therefore, it is bound to be a crucial subject for an eventual FTA with China – a combination of WTO (TBT Agreement) compatibility with deep cooperation with the EU (and hence, indirectly, IEC/ISO), besides openness and transparency about Chinese standards activities, with ample and active consultation. In addition are free access to (far) better data and information, not as a favour but routine and automatic, and with foreseen investment in information generation, which is done without any other purpose in mind, and for society without any tactical or strategic considerations. The latter words are not found in official documents, to be sure. It is the benchmark that the EU would tend to suggest.

The reform of 'standardisation' in China is led by the Standardisation Administration of China. In an official slide presentation by SAC (March 2015), hence by its own frank admission, the basic rationale of the reform is that the current standards system and standardisation management are not suitable. That is, not fit for purpose. SAC explains that this is so for four reasons. First, China's standards are inadequate, aged and lagging behind. Second, they are duplicative and overlapping. Third, the system is not 'reasonable' and not in accordance with the 'needs of the socialist market economy'. Fourth, coordination and promotion are inadequate. There are six *operational objectives*, which can be understood, with perhaps some queries here or there; they are derived from the overall objective of the reform, which is unfortunately rather dialectic, if not fuzzy. The overall objective is to "establish the new type of standards system for synergetic development of the government-oriented standards with the market-driven standards, improve and complete the unified and effective standardisation management system co-governed by [the] government and market".

Below are the six operational objectives:

1. Ensure an efficient and authoritative planning and coordination mechanism for standardisation.
2. Integrate and streamline mandatory standards (see Box 9.1 on terminology) (from local, sectoral and national, all into national).
3. Optimise and improve voluntary standards. (Here, the explanation is puzzling, but part of the puzzle is presumably terminology: voluntary standards should all become 'national' while an upgrade to 'public benefits' standards within the responsibility of the government is announced, and gradually the number and scale of existing voluntary standards should be reduced. Note that a voluntary standard is more problematic in China, as 'voluntary' is not automatically the property of a standard (although it should be) and the government or judges do not fully appreciate the idea of (voluntary) standards – otherwise, the 'reduction' makes no sense).

4. Develop 'group standards' – which is an interesting modernisation because what is referred to are 'technology alliance standards', or consortia standards (in IT, typically), and in China sometimes called 'organisational' standards.
5. Relax control over and invigorate enterprise standards (this is a typical transition measure; phase out registration (!) of enterprise standards and establish self-declaration of such standards as the basis for the Supplier's Declaration of Conformity (SDoCs). Note that, in market economies, company standards are not normally self-declared to the public unless there is a reason (e.g. compatibility), but at the same time, there is a tradition, greatly encouraged by the EU's new approach, of making use of SDoCs for the purpose of conformity assessment).⁷⁵
6. Improve the international standards activity of China (by mutual recognition and by more experts and chairs in ISO/IEC). The Action Plan has several stages from 2015 to 2019 inclusive, led by a 'joint session' including AQSIQ and SAC as well as 39 ministries. The reform incorporates a massive clean-up of the overly complex and confusing system of standardisation and of the overall body of standards.

In TIC matters, such as certification, it is usually clear where to go, the problem is rather what are the exact laws (mandatory standards) to which adherence is needed. Besides this occasionally costly uncertainty, there is often no technical correspondence, let alone full similarity, between European standards (serving EU regulations) or technical specifications in EU laws (like in the old approach) or for that matter IEC/ISO standards and Chinese requirements. Yet, there seems to be no detailed study on the frequency or costs of these disparities in standards or technical regulations between the EU and China. But it is precisely these disparities that are called 'technical barriers to trade' and their costs can be high indeed. As the new reform of 'standards' in China frankly acknowledges, a good deal of existing TBTs stem from a range of legacy problems from the old systems that require large-scale measures and institutional reform. In this respect, certification has taken on more modern forms. For product certification, the China Compulsory Certification (CCC), some typical examples include the Special Equipment Licensing Office (SELO, for boiler pressure regulation), the certificate for nuclear safety equipment and the Network Access Licence (NAL), in total 175 products by the end of 2012, with third-party certification of a prototype test and company inspection, followed by (annual) supervision. Whereas management and process certification (like that for occupational health and safety (OHS) or risk management) is voluntary, energy efficiency certification is mandatory (supporting labelling, although based on self-declaration in 33 cases). So too is environmental certification (based on ISO 14000; think also of laws somewhat comparable to EU approaches such as the restriction of hazardous substances (ROHS) and waste electrical and electronic equipment (WEEE)). China now has 60 effective standards on mandatory energy

⁷⁵ In this light, one can understand why the European Chamber advises the Chinese government to apply the self-declaration of enterprise standards solely to aspects of technical regulations (so, linked to the SDoC) and not to voluntary standards.

efficiency (i.e. regulations), rising to 100 by late 2017.⁷⁶ Other ministry-level regulations referring to standards include the State Food and Drug Administration (SFDA) for medical devices, the ministry of health (MoH) sign for food safety and the entry approval for MIIT's telecoms equipment network (presumably based on APEC's MRA in this area).⁷⁷ China is also introducing low-carbon certificates for energy-intensive activities, such as Portland cement, flat glass, aluminium alloys and certain engines.

Although China is an ISO and IEC member, has become more active recently and intends to become a strong contributor at the global level, it seems that the *actual adoption* of IEC/ISO standards in markets is still very low. This is a major indicator that technical barriers to trade are likely to be high and frequent, especially because the overlap between IEC standards and European (CENELEC) ones is around 78%(!) and even with ISO and CEN standards the overlap is 34%, in both cases pertaining to thousands of standards. There is no agreement between SAC and IEC/ISO comparable to the Vienna & Dresden Agreements that the EU's standards developing organisations have concluded and which could swiftly increase Chinese adoption as well as enhance the overlap between global standards and the Chinese ones. Xu (2015) notes that the consistency between Chinese and international standards in the consumer products sector has now reached 95% (but elsewhere she says it is generally low, that is, on non-consumer issues). Through the reform China strives to become a large, if not the largest world standards 'power' by 2020: the language conveys the idea that a chair in IEC/ISO can exercise power, rather than being a top expert (on merit), a facilitator or a mediator.

China itself has suffered from the legacies of this standard non-system and is trying to correct it now with much effort. One major goal is a unified (internal) market in China – perhaps surprising for newcomers to China – which should also be beneficial for EU firms, whether already in China or exporting to China. SAC also speaks of standards as a 'hard constraint' for quality. The new standards system would be 'simplified' and merely have national regulations (mandatory standards), voluntary standards (not only from 'organisations' but also from the government) and enterprise standards (which used to be controlled and registered). Terms like 'recommendatory standards' are employed – gradually to be developed and eventually moving towards 'public interest' standards. But the authors have been unable to trace any definition or meaning of what 'public interest standards' might be. The term is a curious one, as in a proper system, all standards when properly adopted in an open fashion, *are* in the public interest.

It is early days for this reform. It is worth quoting two experts in an attempt to appreciate the meaning of the reform. Xu (2015) notes the transition problem in all this (how much government still?) and the idea that enterprises can have their own standards without registering them is still alien to many government officials. Ministries are still not sufficiently bound to coordinate so as to no longer act on their own, and in certification, ministries can still refer to any standard. The coordination with so many ministries might be a nightmare if not based on strong principles as in the

⁷⁶ These include, e.g. office equipment, household appliances, lighting products and commercial and industrial equipment.

⁷⁷ For details of APEC's MRAs, see Correia de Brito, Kaufmann & Pelkmans (2016).

EU, principles that are enforced in the EU (also by judicial review) and from which one cannot deviate. Yet another question is whether EU firms can participate better and more frequently in local standardisation, as this has been a problem, depending on the sector. Ms Xu is also warning that the consortia/alliance/group standards might cause new TBTs when not closely aligned with *global* consortia in such areas.

Box 9.2 Standards reform: The Standardisation law of PRC

One concrete result of the reform of Chinese standardisation is the country's first-ever Standardisation law, issued 4 November 2017.⁷⁸ This law has the virtue of bringing together and clarifying the main provisions of standardisation in China, and this alone is bound to help overcome the earlier confusion. It confirms the overwhelming (approval) role of the state at all levels, with clear differentiation between mandatory standards [in fact, regulations] and recommended standards where the state assumes a less interventionist attitude. Nevertheless, even for recommended standards, there is a unification requirement, subject to state supervision and both recommended national standards and industry standards (also recommended) are 'formulated' by departments under the State Council [Arts 11 and 12]. Only for [Art. 18] standards from 'social organisations' [chambers of commerce, associations, industry technology alliances, etc.] can standards be written by internal agreement, based on elementary ISO principles. Nevertheless, there is still a clause which promises control by the state ["...shall work in consultation with the relevant administrative departments under the State Council to regulate, guide and supervise the development of social organisation standards"]. Art. 19 confirms that an enterprise can develop a standard on its own or with other firms – remember, that this was not the case or at least it had to be registered! – but Art. 27 specifies that such firms "shall disclose the numbers and names of the mandatory, recommended, association or enterprise standards they follow" (best via a public standards information platform). This obligation does not seem to recognise the proprietary nature of a company's own technical manual as this may be seen as 'an enterprise standard'. In the EU this is unthinkable. Moreover, in that manual (or, internal standard for production), its intellectual property might be incorporated, which should be fully protected! The new law establishes civil liabilities and it explicitly prohibits anti-competitive provisions or effects of standards. Finally, Art. 2 ends the terminological confusion about what standards there are in China: "national standards, industry standards, local standards, social organisation standards and enterprise standards. National standards fall into mandatory standards and recommended standards; industry standards and local standards are recommended."

Ziegler (2015) (an expert on Chinese standards) trusts that greater emphasis on coherence and integrity of the system will support the European ISO/IEC model of standardisation (whereas Xu fears some Americanisation). Ziegler also holds that "China is fostering its unique system of compulsory public interest standards playing a major role in the absence of technical regulations". With China's leadership, he agrees that the discrepancy between China being the world's no. 1 trader and the poor state of its standards and regulatory system has to be resolved urgently. In Ziegler's view,

⁷⁸ The law (in English) can be found on the SESEC website (the EU/China standards project): www.sesec.eu, attached to the Bimonthly Newsletter for October/November 2017. Two annexes are provided as well.

compulsory standards are a product of co-regulation, i.e. they are not technical regulations, but rather standards made by the market (yet in an organised setting), which are then made compulsory. In the EU, the EU legislator sets the objectives based on market failures and then lets co-regulation work itself out. Is that so different? Ziegler is outspoken about the risk of modern protectionism: China, with government-sponsored domestic standards, might well create an insular market (indigenous technology). The Chinese have seen acceptance of some standards at IEC/ISO level already and they network more and more (e.g. with DIN). But where are the Chinese companies at the global standardisation level (except for Huawei)? Even in South East Asia, recognition of Chinese standards is low, according to Ziegler. There is somewhat more emphasis on TBTs and standards in recent China trade agreements, but so far, little outcome. China is shaping up, though: ASEAN plus Six (or RCEP) and the Silk Road Economic Belt do pay attention to TBTs, respectively, and to standards (see also section 9.4). Of course, the AIIB area and the Central Asia Belt are free of US domination, but are the Central Asian countries going to make a difference? Is the Belt a new China orbit?

9.4 Some inferences about lowering TBTs in an EU-China FTA

The most important inference about Chinese TBTs is that Chinese exports, inward FDI and to some extent imports have grown extremely rapidly and thereby far outpaced the domestic capacity to govern risk regulation and all its technical implications. There is a powerful legacy to still hold on (often on a highly fragmented basis between many ministries and agencies at the central level, as well as provincial and local governments) to numerous direct controls and 'authority'. However, the technical aspects of risk regulation is an archetypical area where the state should carefully define its proper role (e.g. setting risk objectives for health and safety) and organise technical support in a range of different ways, but principally through clear governance, *without* pretending that the state masters all and everything technically. This is neither necessary nor desirable. The overwhelming influence of the 'state' in issues that are closely related to TBTs (standards, technical regulation and conformity assessment) has generated a labyrinth full of inefficiencies, contradiction and delays that have now been openly criticised by the Chinese government itself, notably when announcing its drastic overhaul in 2015 by the SAC. It is in the interest of the EU to actively cooperate with China so as to support a speedy improvement of the system and its results, in an FTA or without it. The probable advantage of an FTA in this case is that the EU might be more directly involved during the overhaul in China, so that the new system is and remains open, harmonious with international standards and their application and interaction with ISO/IEC. It might also help to facilitate transparency in a more systemic way in this area. One should not forget that, until now, China has not had private, independent standardisation bodies that could, in the WTO TBT tradition, be expected to provide transparency on a permanent basis. Nevertheless, the authors understand that transparency has improved a great deal and that a lack of coordination or parties involved with market power can be behind insufficient transparency.

In fact, although China does have enormous technical capacities, which are quickly increasing too, there is a great need for capacity ‘shaping’ (much more than capacity building) in a (so far) inefficient domestic institutional environment (with vested interests as well). The EU and ISO/IEC ought to be directly involved to help this shaping, in both a constructive way through technical cooperation and as a guardian to link more and more with IEC/ISO, for example by creating an agreement similar to that which the EU has made through the Vienna & Dresden Agreements⁷⁹ and in other ways.

How prudent China is in TBT affairs can be gauged from the TBT chapter in the China-Korea FTA.⁸⁰ It is all about mutual understanding and strengthening cooperation, while in repetitive ways re-affirming the TBT Agreement. There is a legal basis to undertake several more advanced initiatives (e.g. equivalence) but nowhere any firm commitments. The transparency article (6.7) is diplomatic but mainly rests on endeavours. There is stronger encouragement of ‘cooperation’, even joint efforts, and this is exactly what the EU in a possible FTA should also encourage. This cooperation includes many aspects but again without hard commitments (e.g. ‘may use’ accreditation and shall encourage national certification bodies to be a member of the IECEE-CB scheme). Details on closer cooperation (called ‘implementation’ in Art. 6.10) on conformity assessment, which might refer to an MRA, are postponed (“agree to make their best efforts to negotiate...at their earliest convenience”). One can even understand this Chinese prudence, given the need to engage in massive domestic reforms of risk regulation and its technical support in the years ahead. Although the EU-Vietnam FTA text on technical barriers to trade is less stringent than for example, the EU-Korea FTA, given the level of development of Vietnam, and it also emphasises cooperation for good reasons, the text goes much further and is more precise and detailed than the TBT chapter in the China-Korea FTA.

⁷⁹ When a new standard or family of standards has to be written, the Vienna & Dresden Agreements instruct the EU (usually, for certain regulatory objectives that are widely agreed, but this is no condition; it also happens for standards without a link to regulation), to attempt to write the ISO/IEC standard at the same time (and on the EU side, with the same experts) so that a single EU/ISO/IEC standard will result. This approach is a resounding success and generates increasing harmonisation between EU standards and world ones.

⁸⁰ See chapter 6, on the China FTA Network website (<http://fta.mofcom.gov.cn/topic/enkorea.shtml>).

10. Reducing SPS barriers in an EU-China FTA

The rules, controls and inspections on food safety and on animal and plant health – SPS measures – tend to be relatively costly owing to the great sensitivities about public health and in many cases the need to minimise the risks of products causing disease and its contagion. The WTO SPS Agreement has set basic principles on what can and cannot be done in the SPS area. It is somewhat similar to the TBT Agreement when it comes to disguised barriers to trade, non-discrimination and proportionality, but insists on scientific evidence in a proper risk analysis prior to taking (justified) measures. As China and the EU are WTO members and hence adhere to the SPS Agreement, they are therefore on par, in principle. Both China and the EU (and the member states) are members of the Codex Alimentarius Commission (for maximum tolerance levels, e.g. in water, food and other such standards), the World Organisation for Animal Health (OIE) and the International Plant Protection Convention (IPPC). Nonetheless, there are costly SPS barriers between China and the EU. An SPS barrier is not the same as justified, yet costly measures that are inevitable for public and animal health. In this context, a barrier is creating additional costs for market access beyond what is necessary and justified for consumer and other safety, or in extreme cases, a barrier might refer to a ban, temporary or for an undetermined period, for which the justification is not given, not based on science or spurious. A free trade area between China and the EU should be able to greatly reduce or (ideally) eliminate the extra costs of the two SPS regimes for imports beyond measures that are justified and inevitable. Section 10.1 discusses at some length the main Chinese SPS barriers maintained on exports of EU agro-food into China, which are partly product-specific but for the most part systemic. Section 10.2 discusses the problems as perceived or experienced by third countries when trying to export food, feed, plants or live animals to the EU, with a special emphasis on China where possible. Section 10.3 proposes some guidelines for solutions in the framework of a future FTA.

10.1 Market access barriers of the Chinese SPS regime

10.1.1 WTO and US assessment of Chinese SPS measures

The WTO⁸¹ has been unusually critical of the Chinese food safety (etc.) system in that (i) a “myriad of laws and implementing regulations and rules continue to regulate China’s SPS regime; some of these laws are outdated and repetitive” (WTO, 2014, p. 76), and (ii) the system is fragmented, given that many regulatory authorities belong to different agencies. The latter is a challenge for proper enforcement, with an “overlap of functions and thus an avoidance of responsibility and lack of accountability”. China uses the Catalogue of Entry-Exit Commodities Inspected and Quarantined by Entry-Exit Inspection and Quarantine Organs with no fewer than 2,032 tariff lines at the HS 8-digit level. Some of these tariff lines are not about food, feed, animal health or plants, but include veterinary drugs and cosmetics, among others. The system appears rather

⁸¹ See WTO (2012), pp. 49 ff.; see also WTO (2014), pp. 76 ff.

strict, involving a good deal of red tape. “Some 80% of the goods subject to automatic licensing are also subject to inspection and quarantine and some 35% of goods subject to non-automatic licensing were also subject to inspection and quarantine.” Moreover, there are two additional aspects to be taken into account. First, there is another catalogue on Import Commodities subject to safety and quality permits, stipulating general standards for goods in case such goods are highly sensitive in terms of safety, sanitation and environmental protection. Second, foreign enterprises that manufacture, import, process and store food need to be registered before their related food imports are imported into China.

The question is whether this regime is stricter, i.e. more costly, than other regimes of WTO members, or more costly than necessary, creating extra barriers. The WTO is suggesting that this is so but it stops short of literally stating it. In the WTO Trade Policy Review of 2016 (WTO, 2016), however, the approach is far more descriptive and largely focuses on the new overall Food Safety law of 2015. Without literally saying so, the WTO report regards this law as a major improvement, addressing to a considerable degree the problems of overlap, the multitude of agencies and inconsistencies noted above. The European Chamber in China⁸² also acknowledges that China has made great progress. China is an outlier in Asia and also compared with the EU when it comes to SPS notifications. Thus, in the period 2001-2014, China notified SPS measures 1,020 times, compared (in Asia) to 523 notifications by New Zealand, 516 by Korea and 427 by Japan. The EU’s notifications amounted to 558, with Albania coming second in Europe with 184; there is little notification by EU member states, as SPS regulations are for the most part highly harmonised in the EU. China’s position as an outlier might stem from its overcrowding of regulatory authorities and the two catalogues, but caution is needed before drawing such conclusions.⁸³ Notifications may be broad or narrow and repeated updates can also lead to distinct notification practices. In other words, it is not obvious that China is more restrictive in SPS merely because it has a high score in notifications to the WTO SPS Committee. Yet, in April 2016, a new restrictive measure was suddenly introduced which is regarded by agribusiness as a partial ‘closure’ of the market for EU suppliers, as the latter have to produce harmonised certificates for export to China. Exporters fear damage to the tune of billions of euros and the EU as well as EU member states have protested fiercely.

What is striking in a number of cases on China in the US Trade Representative’s (2014)⁸⁴ report on SPS is how long it takes before SPS irritants or bans are resolved by China, implying medium to long-term damage to (in this case, US) exports. For instance, there is the issue concerning ractopamine, for which the maximum residue levels are now under the Codex Alimentarius, yet the matter still has not been resolved bilaterally.

⁸² Position Paper 2017/18, op. cit., p. 175: “China’s legal framework on food safety has undergone great improvements in recent years with the acceleration of the establishment of a unified and authoritative food supervision system”.

⁸³ For example, the US has notified as many as 2,769 items, followed (in the Americas) by Brazil with 1,058 and Canada with 946.

⁸⁴ See the report on SPS from the US Trade Representative (2014) (http://ustr.gov/sites/default/files/FINAL-2014-SPS-Report-Compiled_o.pdf).

Other outstanding issues are the BSE-related ban on (here, US) live cattle, beef and beef products applied since 2003, the zero-tolerance level of salmonella in poultry for the last decade or so (even though zero levels are unachievable technically, likewise for Chinese chicken) and a long-standing dispute on types of apples since 1995(!) affected by alleged pest-related concerns and bans on avocados since 2005, as well as table-stock potatoes (since 2000). In all these cases, there are undue delays and forms of foot-dragging, which in WTO terms, are disguised forms of protectionism.

10.1.2 EU concerns about Chinese SPS barriers

10.1.2.1 General concerns

The EU is delighted about the development of trade in agro-food with China, with an average annual rate of export growth of no less than 23.9% over the period 2005–15.⁸⁵ In 2016, growth in EU agro-food exports, including fish, to China was 16.8%. There is a firm conviction in EU agro-business and policy circles that China needs high-quality and safe agro-food products, that consumers are keen to obtain them and have the purchasing power by now to buy such imported products. There is still a lingering mistrust in Chinese agro-food produce among Chinese consumers after several food scandals in the country, in spite of major reforms in the SPS system and inspections that the Chinese government has since introduced.

At the same time, the EU has serious complaints about the Chinese SPS regime as to how it works in actual practice. The overall view may be summarised as follows: SPS measures are often far too costly and overly restrictive or create considerable uncertainty, which blocks or significantly reduces actual as compared with potential EU agro-food exports. So far, the EU authorities take the benign view that bilateral consultations and a good deal of patience, rather than WTO litigation, is the proper way to attempt to resolve these disputes, in addition to extensive cooperation programmes with China (for the latter, see Box 10.1). An FTA between China and the EU could be seen as a further deepening and more committing form of working together to drastically lower the (unnecessary) costs of these SPS measures. The 2015 Food Safety law in China offers a better and more systematic foundation for accomplishing many practical improvements as the systemic issues are likely to become less important.

Box 10.1 EU-China technical cooperation on agro-food and SPS

Regular consultations between the EU and China on trade irritants in agro-food are complemented by technical cooperation of a fairly wide scope. Basically, the EU-China Trade Project aims at capacity-building for high-quality SPS management in all main areas and especially for technical issues, testing and risk analysis. The project has four pillars: food safety, plant health, animal health and biotechnology (plus some work on GIs). In food safety, it is about modernising food safety strategy, including risk analysis, traceability and food safety standards.

⁸⁵ In addition is the average of annual growth of EU agro-food imports from China, at a lower but respectable rate of 7% for the same period.

It has elaborated 28 technical activities, and so far, held 12 technical workshops. In plant health, it is about pesticide residues, organic agro-producers and agro-product processing technology, which have been the subject of 6 technical workshops/seminars and 7 other activities on EU technical plant-health regulations to date. On animal health, it is about welfare and disease prevention, with a focus on BSE and enhancing reference laboratory capacity, with 22 technical activities and another 3 workshops thus far. In biotechnology, the project seeks to support EU-China standards harmonisation, with a view to helping to ensure the safety and legality of Chinese products entering the EU. This is a new pillar, with only two activities having taken place by late 2015, including one on technical assistance to support the inspection of genetically modified organisms (GMOs). For details, see the EU-China Agriculture & Food Safety website (www.euchinaagri.org/).

Not unlike the WTO, EU complaints about China's SPS regime are largely systemic. In other words, although specific products or EU member states may be hit, the root cause, more often than not, is a set of shortcomings in the domestic regime as such, including the following top three:

1. *Lack of respect for international standards*, and indeed for those of the international organisations of which China is a member. Note that the SPS Agreement is clear about the acceptance of international standards, adopted after great care about risk assessment – if one deviates or refuses acceptance, this has to be justified, based on a risk assessment and based on science, showing empirical evidence of doubt. China does not have a habit of doing so;⁸⁶ but the 2015 Food Safety law should help to improve on this record.
2. *Lengthy, complex and non-transparent application procedures* that are unnecessarily costly and generate uncertainty for potential exporters. Most potential EU exporters of agro-food are experienced in penetrating many markets outside the EU and are not infrequently bewildered by the problems and sheer costs of market access to China; and
3. *'Embedded discrimination'* in the approach of the Chinese authorities in several ways. The principal problem the EU has with China's SPS regime is that China does not recognise the (far-reaching, if not almost complete) harmonisation at the EU level of SPS measures, but instead deals with member states and on a case-by-case basis for every product. The upshot is that similar or identical SPS problems are often addressed in different ways and with distinct results, and that waiting time is extended unnecessarily.

There are indications, consistent with the WTO assessment, that far too many agencies/ministries are involved in China, not to speak of (inconsistent) actual border controls (between different ports) once a consignment arrives. The multitude of agencies causes confusion for EU exporters, as their messages or instructions tend to overlap only partly, while their internal communication leaves much to be desired.

⁸⁶ For years, this has been a prominent complaint of the European Chamber of Commerce in China in its Annual Position paper, and was again in 2015.

Probably, for the same reason, applications are not always answered or take a long time to be 'heard'. Recently, when queried about the problems of the Chinese SPS regime, a senior APEC-based trade diplomat noted drily that, "we have learned to live even with this system". That seems to sum up the EU attitude as well: even though the costs of market access for agro-food exports to China are far too high (and this works its way through to higher import prices for Chinese consumers), it is nevertheless still worth exporting because demand in China is strong and increasing. And in fairness, one ought to add that once the high first-imports hurdle has been overcome, it becomes somewhat easier to maintain a regular flow of exports in given products.

The 2017 Position Paper of the European Chamber in China comprises a large number of specific aspects where the new law as well as the streamlined institutional structure is recommended to lead to lower costs and greater certainty for (EU and local) business. In terms of institutions, two ministries have been converted into the new National Health and Family Planning Commission, whereas three bodies (or the SPS part of their work) were merged into the CFDA (China Food and Drug Administration), a principal unified regulator. Another crucial feature of the Food Safety law is the stipulation of responsibilities of traders and producers in the food value chain (instead of leaving everything to inspection), with severe penalties for neglect and a system of civil liabilities. Also, traceability is taken far more seriously as well as food recall.

10.1.2.2 Specific EU concerns

Since SPS measures can be extremely detailed and since their scope is vast,⁸⁷ only the major specific concerns are listed in Table 10.1. Although specific, some of these are nonetheless rooted in systemic questions as discussed above. The table lists seven specific concerns. Early in February 2016, the EU Market Access database listed eight issues, with a good deal of overlap with Table 10.1; three of these eight are persistent trade irritants as they date back to 2005 and 2006.

⁸⁷ It might be recalled that, in the EC 1992 programme for the internal market, when EU-wide SPS was introduced, no fewer than 160 directives were included in the White Paper of 1985, later followed by additional legislation and countless comitology decisions.

Table 10.1 Specific EU SPS concerns about market access to China

	Issue	EU complaint	EU position
1	Approval of meat establishments	The application process for the approval of meat establishments for export to China is burdensome and can take several years; the procedure is not clear (not predictable, transparent and there is no end-date); it requires prior on-site inspection; it is not limited to what is 'reasonable and necessary'.	The Codex Alimentarius standards lay down that such audits should focus on the performance of the local authority, as a prior step to allowing exports (if all Chinese requirements are fulfilled), and not on-site audits as a rule; for every new product, a new procedure has to be started all over again; in all of this, China violates Annex C on inspection/approvals of WTO SPS commitments; there is also the issue of approaches to each EU member state.
2	Dairy: Non-alignment with international standards	Chinese standards for cheese ignore international standards, especially on the levels of yeast and mould, cheese definitions, the methods used, the list of raw materials and permitted ingredients; there is no risk assessment to justify this; (see also the case study on cheese by the European Chamber of Commerce in China (2015, pp. 138–139). By 2017 there were signals that China would begin to allow cheese imports from the EU more systematically.	Cheese is an important and traditional export product of the EU: for about a third of EU countries this is a significant export item; de facto this implies a ban on certain cheeses with great traditions.
3	Phthalates in alcoholic beverages	A sudden, unjustified import restriction was introduced in 2013, requiring very low levels of phthalates, not underpinned by a risk assessment at first, and with no withdrawal once the risk assessment (in 2014) showed that higher levels were safe.	This inconsistency and confusion would seem to be typical of the old Chinese SPS system; early in 2016, the restriction had not been relaxed or withdrawn, despite the Chinese risk assessment of 2014.
4	Micro-biological standard on listeria	For meat and dairy, zero tolerance of listeria is maintained by China; China does not accept the alternative approach in line with a 2007 standard from the Codex, which provides an equally high level of safety.	This barrier is overly restrictive as the Codex standard shows; it affects important potential meat and (raw milk) cheese exports, so it is significant for EU producers.

5	BSE-related ban on (b)ovine and its products since 2000	Until 2014, China never allowed these imports despite BSE long having been overcome in Europe; the first new country applications date back to 2005; no risk analysis has ever been published by China; since 2014, a slow recognition of the problem has begun, with selected EU member states.	The EU finds that China unjustifiably discriminates between EU and non-EU WTO partners (allowed to export (b)ovine products) and between EU member states (having almost all the same OIE (negligible) risk status): Hungary can now export beef and Romania live cattle, while for the Netherlands and Ireland the ban has been lifted but the renewed process of market access had not been completed by early 2016; other EU countries are not yet allowed to export.
6	Non-recognition of EU 'regionalisation' for cases of African swine fever and avian influenza (bird flu)	China does not recognise 'regionalisation' when outbreaks of contagious diseases among animals occur, despite Art. 6 of the SPS Agreement and the OIE standards for regionalisation; regionalisation determines, under strict conditions, disease-free zones from which trade can safely take place – hence, pork and chicken exports from zones without any disease are affected; these bans are disproportionate (namely country-wide, not region-based); also, timeframes are disproportionate (for avian influenza in poultry, three months after a stamping-out policy is the norm); so far, China has not provided its risk assessments for non-recognition of the stringent regionalisation policies strictly implemented in EU member states whenever an outbreak occurs for diseases like African swine fever and avian influenza.	China violates various critical aspects of the carefully constructed international SPS regime in cases of such outbreaks, and is additionally excessively slow to proceed on lifting the bans, besides lacking transparency and predictability, which is all very costly.
7	Chinese import ban imposed on (b)ovine genetic material due to the Schmallerberg virus (in 2012)	The OIE says that the virus is not an emerging disease, and does not meet the criteria for setting an international standard (and thus not a trade condition); China has not provided a risk analysis and refuses even to trade semen from (negatively) tested animals; technical cooperation on the Schmallerberg virus with China is now ongoing, at China's request.	The EU suggests that the problem has arisen, in part, because China suffers from a lack of capacity building, which the EU is supporting. The European Chamber also emphasises this aspect in its 2017 Position Paper, p. 175.

Source: Authors.

The problems listed can hopefully be resolved over time, but if the systemic issues are not addressed by China itself, e.g. under the 2015 Food Safety Law (which contains the needed principles and structures), new such problems are bound to occur. Insofar as Chinese consumers and customers (e.g. supermarkets) continue to demand imported food from the EU, if not more of it, the transformation and improvement of the Chinese SPS system in terms of its actual implementation would facilitate such imports (and therefore, increase Chinese consumer welfare) and lower its prices appreciably (further increase that welfare).

The costs of these problems to EU exporters and China-based importers are considerable. As an example, it is advised to read the user-friendly guideline from the EU SME centre in Beijing about “Exporting meat to China”⁸⁸ showing the complexity of applications, approvals and protocols. There is also a proxy calculation of the costs of clearance upon arrival in a harbour (with the example of Qingdao), with 16 fees and other cost items (such as the import tariffs (see chapter 8), import agent fees and empty container charges), as well as the delays (in days) when going through all the steps necessary.

10.2 Concerns from China and WTO partners about EU SPS barriers

Although the EU is a leader in SPS matters, this does not mean that there are no trade irritants or actual or perceived barriers for WTO partners, including China. This is clear from the eight ‘specific trade concerns’ listed in the WTO’s Trade Policy Review on the EU (2013, p. 64), with two from China⁸⁹ and the ten new specific trade concerns in the Trade Policy Review for 2015 (WTO, 2015, p. 59, footnote 119).⁹⁰ In WTO (2017, p. 84), the new GMO discretion for EU member states, even when the EU has approved the GMO, is mentioned as a trade concern as well. The EU SPS regime is stable, with the exception of new (2013) proposals for the simplification of SPS issues in the value chain, including a further convergence with international standards. The only two perpetual concerns in SPS are the day-to-day application of the EU’s rapid alert system RASFF and the EU’s GMO regime. The second one defies the normal application of the precautionary principle and can therefore only be regarded as a societal choice for a very strict regime. Since the SPS Agreement is based on scientific risk assessment and the related justification of restrictions, the EU’s GMO regime is globally regarded as fully inconsistent with what the EU, in other areas of SPS, firmly defends and

⁸⁸ See the website of the EU SME Centre (www.eusmecentre.org/en), version of November 2013. More generally, see the article “How to export meat products to China”, of 2 June 2016 on this website and a detailed technical guide on market access (July 2016, to be purchased).

⁸⁹ These relate to the regulation on polyamide and melamine plastic kitchenware, and the limits of aluminium in flour products.

⁹⁰ Among these are the French ban on Bisphenol A, some highly specific SPS cases, the EU proposal for categorisation of certain compounds as endocrine disruptors, and the EU’s renewal of GMO approvals.

practises.⁹¹ When the precautionary principle is invoked, there have to be explicit risk reasons and at least some partial scientific evidence of concerns about threats to human and animal health or irreversibility, leading one to take measures in the period until more research might bring greater certainty. But there are no health risks and there is no scientific evidence about health threats from GMOs. After decades of massive and painstaking research all over the world, and after at least two decades of living with GMO-based food and feed in many countries in all continents, GMOs have yet to be identified scientifically as risky; so far, no risks have been identified at all.⁹² This blatant inconsistency irritates many WTO partners, even though formally WTO countries can of course exercise their sovereign right to set higher or distinct food safety objectives. The EU has, however, no case based on scientific risk assessment. Nevertheless, the idiosyncratic EU approach creates a series of complications in trade, also with China.⁹³

The first issue, RASFF, is a minor one. It is more about the risk that food and feed products, when rejected at the EU borders in one place, might also be rejected – in a chain reaction to the automatic alert system notification – at many other border posts in the EU, or that rejection patterns differ among EU member states. Some WTO partners have raised concerns and asked questions about the transparency of the RASFF and potential restrictions of trade. This might be owing to a lack of coordination of the member state border posts. For this purpose, ten new standard operating rules published in December 2014⁹⁴ will fully harmonise the application.

RASFF has been, and still is, important for China's exports to the EU. China is, at the same time, a regular problem case when it comes to food/feed risks notified to RASFF by EU member states, and a country involving considerable follow-up in order to prevent repetition. China is traditionally the country with the highest number of notifications in RASFF. Still, from the 2011 peak of 562 notifications, the trend has been steadily downward: 536 in 2012, 433 in 2013, 413 in 2014, 394 in 2015 and only 254 in 2016 (still the highest). In the annual top-ten of countries of origin of RASFF notifications of risky products, the country has long remained (too) prominent: three out of ten countries in 2011, no fewer than six out of ten in 2012, three in 2013 and four in 2014. In 2016, however, China had only one in the top-ten (aflatoxin). In 2014, of 421 relevant cases, 77 were followed up with China, in the hope of increasing awareness. Based on the data, the campaigns seem to work to some degree.

⁹¹ This is quite apart from the enormous economic and social advantages of GMOs for hundreds of millions of farmers in developing countries, especially in areas where diseases spread easily or (say) too little water can ruin a harvest.

⁹² See European Academies, Science Advisory Council (2013) (www.easac.eu/fileadmin/Reports/Planting_the_Future/EASAC_Planting_the_Future_LAY_SUMMARY.pdf).

⁹³ Thus, in the RASFF's top-ten notifications, e.g. in 2010, cereals imported from China contained illegal GMOs. However, RASFF is about high-risk food or feed and GMOs do not pose any risk!

⁹⁴ See "RASFF – Food and Feed Safety Alerts" on the European Commission website (<http://ec.europa.eu/food/safety/rasff>).

10.3 Lowering SPS barriers in an EU-China FTA

SPS is typically an area where there will always be a need for a mix of cooperation and for exercising the national right to regulate and indeed protect consumers, as well as livestock and plant health. In the case of China, however, there are some systemic questions that should be expected to become less of a problem over time, but nowadays are severely hindering, at times even blocking, trade in food, feed and plant products. The costs of much wanted agro-food imports into China are unnecessarily pushed up to high levels.

China faces the great challenge of reforming and streamlining its domestic system. This is easily said from the outside but requires forceful institutional reform and greater transparency, both still somewhat sensitive in China. The present study on the FTA is not the right place to discuss this and it is less than clear that recommendations on such a reform should come from 'outside'. Still, all trading partners and the WTO have insisted on this for years. The 2015 Food Safety law has raised expectations of a better systemic approach and with more adequate and less fragmented institutions. One aspect in particular, so typical for a system that emerges out of communism, keeps irritating European business in China: the fact that 'voluntary' standards are still enforced (by some judges and administrators) *as if* they are regulations with a mandatory nature.

In addition, China has been catapulted into middle-income status in a short period of time and is still growing fairly rapidly. But it would seem that the capacity, both technical and institutional, to properly address the issues and guarantees of 'safe' food and feed, is much behind what would be desirable and indeed what is more and more expected domestically and internationally. The EU has developed a programme of intense agro-food technical cooperation (see Box 10.1 above) and more of the same is necessary for years to come. Nevertheless, it would be useful if this cooperation were more explicitly linked to the facilitation of market access and to greater transparency. It should be noted that the EU still waits for a resolution of three substantial complaints with very long delays. The experience would seem to suggest that an EU-China FTA should agree on a maximum waiting time for substantive answers and on cooperative ways of solving the problem, with greater mutual obligations in procedures as well as transparency, so as to pre-empt these situations.

But it is not just about the government, it is also about the agro-food value chains in China. There is a lack of awareness, even after some food scandals, in value chains about the responsibilities of all private players. Value chains in food and feed do require shared responsibilities, perhaps with a liability system as well, and inspection cannot possibly solve all problems. It is good to observe that these key principles have been incorporated in the Food Safety law. In addition, it would be a good idea if China were set up an alert system like the EU's RASFF or a similar alternative, with full openness and consistent follow-ups.

11. Market access in services: China and the EU

11.1 Introduction

Cross-border trade in services with China, other than personal travel and (to some extent) air and maritime freight transport, is heavily restricted. When EU companies attempt to go for FDI in China in order to provide services, they find that many services markets are blocked or restricted for foreign FDI. For Chinese companies coming to the EU, FDI is basically free and cross-border services are easier, albeit that (for reciprocity reasons) some of the liberal access regimes are not applied. In GATS, the only initiative to widen and deepen services commitments is the plurilateral TiSA (currently negotiated in Geneva), for which China has shown interest but has not yet made significant offers enabling the country to join. For these reasons, there is the expectation that an EU-China FTA might greatly facilitate market access in services on a bilateral basis.

General principles of market access in services are determined by the GATS, for both the EU and China. The specifics per sector or subsector (some 160 in total) are set out in the GATS (opening) commitments, schedules annexed to GATS. For China, the GATS commitments date from 2001, when the country became a WTO member; for the EU, they are from 1995, except for telecoms and financial services (late 1990s). The actually applied market access may, at times, be better but this does not take the form of a legal GATS commitment (not bound). Broadly speaking, an FTA between China and the EU can be beneficial because it is an opportunity to widen and deepen the commitments under GATS in a bilateral fashion. There is plenty of room to do this, as the EU has already done bilaterally in several FTAs recently concluded. Recent FTAs that China has concluded have hardly or not yet seized this opportunity. For access to China's services markets, this opportunity is significant, as services markets are often (partially) exempted in GATS commitments, closed or subject to heavy requirements of many kinds. Moreover, there are some prominent examples of formal openness of the Chinese services markets, but oligopolies of SOEs have the effect of preventing actual entry beyond trivial and highly specialised services (e.g. services provided only to EU firms in China); it is not clear whether anti-trust is effectively applied.⁹⁵

Services markets can be penetrated through four modes of supply as the GATS specifies: cross-border trade in services (mode 1),⁹⁶ investment (as FDI, also called (local) 'establishment' or 'commercial presence' - mode 3) and temporary cross-border services (mode 4, also called 'temporary movement of natural persons', either technical or other service staff for a contracted short-term assignment, or intra-corporate staff for

⁹⁵ Thus, Bergsten, Hufbauer & Miner (2014, p. 320) insist that, if a US-China FTA were ever negotiated, the article against abuse of monopoly position (see Table 11.3, further) should be extended to oligopolies (of SOEs) with equivalent conduct.

⁹⁶ Mode 2 is also cross-border trade but initiated by the consumer (e.g. a tourist) or customer moving to the supplier. In actual practice, only mode 1 matters for FTAs and negotiators. Moreover, passenger travel is usually mode 2 but the sticking issue may well be visas, which fall outside trade policy (and hence outside an FTA).

multinationals or actual or potential investors). In particular, mode 3 (local establishment through FDI) is – in many services sectors – the only effective route to penetrate the market and supply services requiring close relationships with clients (for trust and service quality). This creates an additional complication because the local FDI regime will affect this entry route for the services business. Thus, if service market X is relatively free but FDI in sector X is restricted or banned, foreign service provision will be effectively impossible or at best trivial. Similarly, if a service market X is restricted (e.g. by highly conditional licensing) but FDI is not restricted as such, the upshot would be more or less the same: no effective access. Therefore, although market access in services is an FTA issue, it cannot be fully separated from investment negotiations, certainly not for services. Chapter 15 on the CAI currently negotiated between China and the EU addresses this aspect of market access, too. Sometimes, services and investment in FTAs are taken together – in other words, the CAI becomes part of the FTA – as is the case in CETA. In the case of an EU-China FTA, however, it is unlikely that a CAI at the EU level would be ‘incorporated’ in the trade bilateral. The current sequence, namely the completion of the CAI first, will probably determine the FDI access and the FTA may have to be built on that. For Chinese access to the EU, the FDI issue is a minor one, as the EU FDI regime is very open indeed. Chinese enterprises have little difficulty in establishing themselves in the EU in almost all sectors and recently, they increasingly do so. Section 11.2 sets out recent attempts to quantify the costs of access barriers to services markets, here bilaterally between the EU and China. Section 11.3 discusses, respectively, access to the Chinese services markets in various modes based on a summary of 5 aspects for 13 services sectors in a lengthy Table 11.1, followed by a similar qualitative summary about access to the EU services markets for Chinese firms based on WTO reports (in Table 11.2). Section 11.4 speculates on the potential value added of an FTA, also in light of the results of the China-Korea FTA and the EU’s recently concluded FTA with Vietnam.

11.2 Measuring the extent of market access in services: China and the EU

It is extremely difficult to assess the degree of restrictiveness of market access, in the various services modes, without lengthy qualitative analysis of regulatory and other measures and their application. Recently, the OECD and the World Bank constructed (distinct) methods to ‘measure’ such degrees, in attempts to inform the debate and comparisons among GATS partners. There are two quantitative tools to ‘measure’ degrees of ‘restrictiveness’ of market regulation in services, one on the services market regulation as a whole, the other specifically estimating the costs of access for a foreign provider in terms of a tariff equivalent (i.e. a percentage on top of the price of supply). A Services Trade Restrictiveness Index (STRI) captures the extent to which trade or FDI related to services are hampered by regulatory restrictions. Thus, the estimation of such indexes entails the rather complex duty of ‘giving a number’ to a set of qualitative information that reflects the overall barriers constraining services activities between countries. The AVE of the costs of market access for a foreign services supplier is similar to the costs of TBTs. In Part III of this study, the empirical estimates of AVEs are employed in order to arrive at estimates of the economic impact of the FTA. The great

difficulty in services is, first, that investment and services supply are blended in a single number, and second, that regulation in services (which may or may not be justified in principle by market failures) is often linked not merely with the service itself but also with regulating or supervising the provider (or both). In addition, the prices (hence, the costs) of services are far more difficult to measure properly than goods prices, with or without TBTs. The question is whether STRIs and AVEs can improve the economic evaluation of openness in services and also can help us appreciate the costs of the regulatory barriers in services between China and the EU. Ideally, this may perhaps support choices in FTA negotiations.

Two STRI indices have been developed by the OECD⁹⁷ and the World Bank,⁹⁸ respectively. Both are briefly reported in order to grasp degrees of restrictiveness, even though their different methodologies make it impossible to compare the numbers exactly.⁹⁹

Figures 11.1 and 11.2 juxtapose the two indexes for an EU-17 selection¹⁰⁰ and China. In both cases, the EU-17 index reports the simple averages for the entire EU-17 of the single country values. Regarding sector aggregation, while the World Bank provides already aggregated categories, for the OECD index different sub-categories have been merged.¹⁰¹ A higher index number means greater restrictiveness.

The two figures show that China's restrictiveness for services markets is (much) higher than EU averages (as expected) – and this difference is more pronounced in the OECD version. In two major sectors, however, the two methods come up with significant divergences: in telecommunications and transportation. For telecoms, the World Bank's STRI for the EU is so low that it falls under completely opened (defined by the World Bank scale system), whereas telecoms is only slightly below the EU STRI average in the OECD method but exceeds retail and is almost as restrictive as financial. In transportation, the two types of STRI indexes even conflict: under the OECD method,

⁹⁷ See the Services Trade Restrictiveness Index on the OECD website (OECD STRI).

⁹⁸ See the World Bank's Services Trade Restrictions Database on the World Bank website (WB STRI).

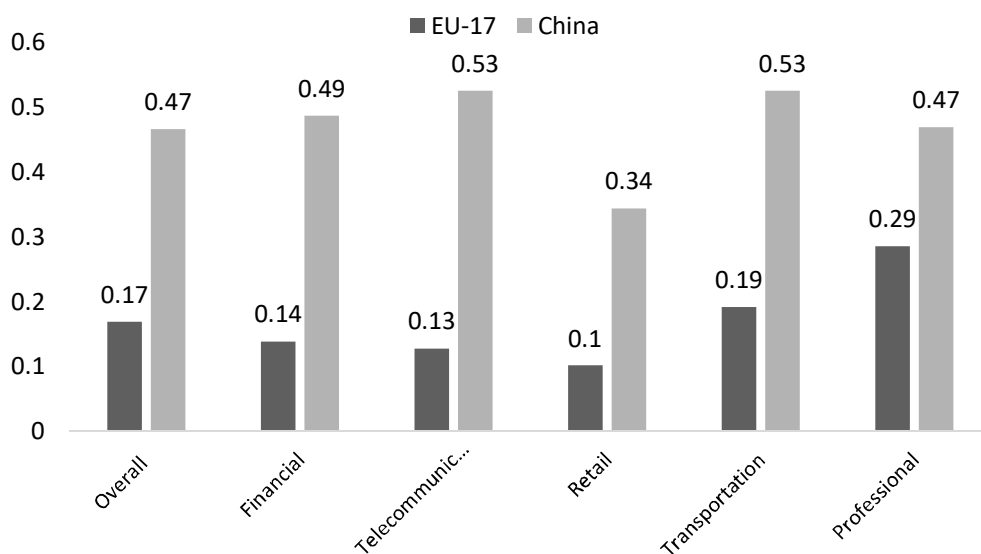
⁹⁹ The OECD index applies a binary approach (90%), that is, yes/no answers to many aspects, grouped into five categories of restrictions. The index from the World Bank is based on a simple average of degrees of restrictions by country and by sector. But it is the weighting system that represents the main difference between the two indexes. In fact, the World Bank index relies on an *additive* method that identifies five degrees of restrictiveness by means of a score from 0 to 100 with intervals of 25. By contrast, the OECD index uses experts' judgments to formulate a weighting scheme that gives a threshold for the binary measure. The five categories of restrictions for the OECD are restrictions in foreign ownership and other entry conditions, restrictions on the movement of people, other discriminatory measures/standards, barriers to competition, administrative issues and regulatory transparency. The World Bank's five degrees are basically open, minor restrictions (25), major restrictions (50), virtually closed (75) and closed (100).

¹⁰⁰ The chosen countries are the only ones in the EU for which both databases have data. The 17 countries are Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Spain, Sweden and the United Kingdom.

¹⁰¹ These are financial (commercial banking and insurance), telecommunications (telecoms), retail (distribution), transportation (air transport, maritime transport, road freight transport, rail freight transport and courier services) and professional (accounting and legal).

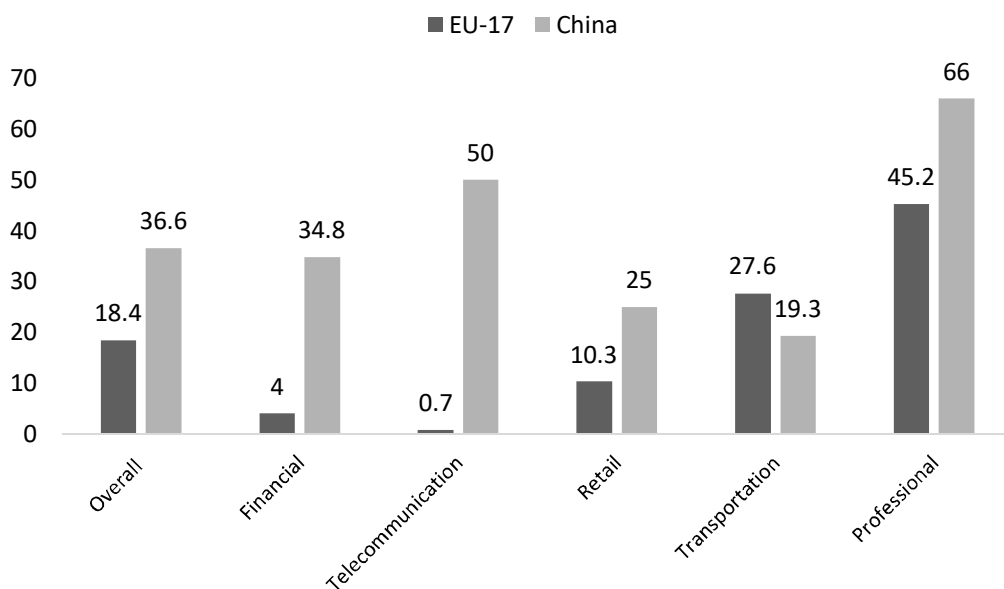
the EU STRI is less than half that of China's, whereas under the World Bank method, the EU's restrictiveness is not only higher than under the OECD method, but the Chinese STRI is so low that it is found to be clearly less restrictive than the EU's. This shows that one has to be very careful with these measures and complement them with substantive, qualitative information and assessment, as the present chapter does.

Figure 11.1 OECD STRI index for the EU-17 and for China, 2015



Source: Authors' own elaboration using OECD (2015).

Figure 11.2 World Bank STRI index for the EU-17 and China



Source: Authors' own elaboration using World Bank (2015).

11.3 Sectoral services market access: China and the EU

11.3.1 Introduction to the regulatory logic of the survey

As a general introduction, what is critical in market access for services in China is a combination of factors:

1. Restrictions on or the banning of FDI (mode 3) in sectors or economic activities. This is done in the Foreign Investment Catalogue published regularly.¹⁰² Four categories are employed by the Catalogue: encouraged, unrestricted, restricted and banned;
2. *De jure* or *de facto* lack of 'national treatment' when EU FIEs are (trying to get into or survive) in the market; and
3. The (super)dominance of SOEs in many industrial and services markets. This dominance is not only a matter of huge market shares as a legacy of the past, but also bolstered by a battery of distortions, all to the sole benefit of these state enterprises. These distortions include credit privileges, information privileges, privileges in prior 'consultation' or in some forms of standardisation, subsidies (including sometimes loss coverage) and the failure of anti-trust authorities to tackle anti-competitive structures and conduct.

Item 1 is complicated by the following core issues:

- i. *De jure* national treatment, resulting from GATS commitments or reforms.
- ii. In many services sectors, national treatment that is GATS-committed by China for some modes, but in mode 3 (FDI in services) it is often done so incompletely. This implies that many forms and degrees of discrimination – here, of EU FIEs – in the markets in China where these EU companies operate, can persist. Thus, even if item 1 above is gradually relaxed, in the sense that the Catalogue had fewer markets or activities 'banned' or 'restricted' for non-Chinese enterprises, this would not guarantee at all that investment and services supply could be (profitably) rolled out in parts or all of China – there may be all kinds of restrictions in the operation of the firm or its provision of services in the market or geographical parts of it. Therefore, the Catalogue is not always the one and only guide to the opening up of FDI, even when one can identify selected steps towards liberalisation. In this respect, an important strategy document was published by the State Council in January 2017, known as 'Document no. 5' which provides a medium-term strategy for opening up, guided by 20 broad policy goals¹⁰³ (see also ch. 15).
- iii. The issue, which the Covington & Burling (2015) report sets out in detail, that a stricter form of national treatment as a discipline for China is a necessary but insufficient condition for achieving a level playing field, e.g. for EU service providers in China.

¹⁰² For the Chinese version, see the website of China's Ministry of Commerce (www.mofcom.gov.cn/article/b/f/201503/20150300911747.shtml).

¹⁰³ Notice on several measures on promoting further openness and active utilisation of foreign investment (Guofa, 2017) no. 5 or State Council Document no. 5.

That is also why there are no fewer than *five routes to 'better market access'* for services in the case of China. One could be a unilateral improvement or extension of GATS commitments by China, as China has done a few times in other areas (including tariffs). Such a unilateral move – without reciprocity of any kind by a GATS partner – is conceivable as an element of a domestic reform programme. It is an open invitation for (more) foreign competition and this may well fit reforms, e.g. a greater attractiveness of services through price, quality, innovation through new business models, variety, or all four. The advantage of a stronger GATS commitment is that it is a powerful sign of commitment, because policy reversals in this respect are costly economically and politically. A second option is to (further) open up FDI in various markets where FDI is now restricted or banned, through the Catalogue. This has happened now and then over the last few years. A third route is a clear and systematic programme of reducing the violations of national treatment, which prevent or severely hinder EU FIEs (and other FDI) in entering or profitably operating in various markets in China. Because this can take many forms, it should be based on a logic rooted in economic efficiency and a spirit of openness while giving more space to private enterprise, whether Chinese or foreign.

In turn, this should fit, if not promote, the reforms announced in the Decision of the Third Plenum of the Party. But it ought to be predictable in order to be credible and to be sustained even in the face of opposition by vested interests or very short-term regional/local criticism. A fourth route is to commit in WTO plurilaterals to opening up sectors or to the greater adherence to national treatment (e.g. to plurilateral partners or all WTO partners). The two prominent examples are TiSA (for services) and the GPA (for government procurement, which applies to goods and services). As noted, in both plurilaterals, China is involved but not yet firmly in or legally committed. There is no doubt that Chinese participation in both fits in with its announced domestic reform programme; yet apparently, the domestic political economy is still too sensitive or the speed would be too high. The fifth route is FTAs with important trading partners, such as the EU. The CAI could ensure the opening up in the Catalogue and both the CAI and the FTA – in some sequence or combination – could enhance and clarify which restrictions of national treatment would still be allowed and which restrictions would be forbidden, in such a bilateral.

In addition, market access can be improved by means of policies ensuring 'better market functioning' in China, in particular, undistorted competition. Undistorted competition may be thought to be neutral with regard to which companies may be disadvantaged, but that is rarely the case in China. In the EU, market competition is typically distorted (if and when it happens, which is not all that common because of its market institutions) by anti-competitive conduct or structure, or by distortive state interventions that have been largely pre-empted or forbidden through the Treaty on the Functioning of the European Union (TFEU) and its case law. In China, that is not the case. *China is an economy 'in transition'* from a planned economy to (what it calls) a 'socialist market economy'.

To appreciate what happens in China, it is good to remember the experience of the former communist countries in Central and Eastern Europe in the period from 1989 to around 2003–04. In order to make markets work, not only is private enterprise allowed to come into markets, but also SOEs have to be subjected to full market

discipline and so-called 'hard budget constraints'. These two conditions mean, in effect, that the ownership by the state does not give such companies any advantage whatsoever. Indeed, once the EU managed to effectively impose these conditions on those former communist countries that could become EU members, a sharp contrast emerged between that group and the former communist countries that had to reform 'on their own'. The first group quickly realised a sound economic catch-up process and attracted large and steady FDI inflows, helping these countries to upgrade while also rapidly improving their services performance. The other group fell behind in many respects, as it is difficult to overcome resistance to such deep transition processes with radical shifts in market share, competitive exposure and innovation, not to speak of shedding of workers and writing off capital. It is thus not surprising that China suggests that WTO and FTA discipline may well help its domestic commitment to reforms.

The principal lesson from the transition in Central and Eastern Europe, however, is precisely that such external discipline has to be 'hard' and credible (even when painful) and consistent. This requires *a kind of 'constitutional regime' of a market economy* as the EU brought to the Eastern European countries. The latter countries were eager and willing to accept the initial hardship because they knew that, besides being inevitable anyway, it would be followed by economic growth and beneficial EU membership. In other words, China should not expect that a selective and slow relaxation of a highly conditional acceptance of FDI and of a largely restricted application of national treatment is going to have effects similar to the switch to a genuine market economy, as the new EU members typically experienced in the run-up to EU membership. Thus, there are many markets where SOEs have a powerful position in the market, jointly, bolstered by distortions that help them alone, while anti-trust is not sufficiently applied or applied mainly to foreign entrants whether for horizontal or vertical agreements, monopolistic or joint dominance, anti-competitive mergers or M&As. Also, in network industries such as gas, electricity, rail, telecoms and postal, the combination of regulation, supervision and anti-trust is not necessarily facilitating entry or effective competitive rivalry by EU entrants, if possible at all.

It is useful to realise that SOEs, in a number of goods sectors, experience or have built up enormous overcapacities (see also ch. 14). Addressing these overcapacities has been announced by China's leadership more than once in the last few years but adjustment is likely to be painful both sectorally and regionally. Its economists argue, with some validity in the medium run, that the pool of workers from the huge countryside (without *hukou*) is not only drying up but is actually shrinking by some 3 million workers per year; furthermore, the domestic services sector is already growing rapidly, allowing quick absorption of the shed labour, so that adjustment is likely to be feasible without too many problems. But there might still be resistance out of fear of 'transition', the need for new skills, displacement to other regions, etc., not to speak of the leadership of SOEs (the CEO always being a high-ranking Party official), which would naturally insist on sustained privileges. In fact, the complex networking in which SOEs operate and are literally related to one another, renders a juxtaposition with 'western' corporate governance both inappropriate and misleading.¹⁰⁴

¹⁰⁴ See Lin, Li-Wen (2017); see also chapter 14.

The relevance for services is that the *overall* reform may well be discredited if, besides the painful adjustment from massive overcapacity in goods sectors, services sectors were to open up too fast or too widely, causing significant adjustment there as well. Moreover, Chinese institutions and control organisms are in the process of retreat and abolition of many tasks and processes, but again, this is a somewhat unnatural process when coming out of a planned economy. Much of what is happening and not happening in and with these institutions is unclear due to a lack of transparency. What is normal and abundantly available in (say) OECD countries, namely, policy documents and extensive consultation about and with such institutions, complemented by academic, legal, journalistic and political scrutiny, is largely lacking in China. The culture of the planned and autocratic economy being that ‘information’ is scarce and regarded as a tool of power or influence – a fortiori for the institutions of the state itself – is still very much alive in China. Of course, there are many ways to make up for this scarcity, such as think-tank reports and ‘soft information’ through interviews. But this is an imperfect substitute for an open societal debate based on a well-explained strategy, in turn built on a deliberate choice between options and an open attitude towards a participative debate, with elected politicians being transparent and accountable for what they do (or do not). One may note that this is China’s choice – which goes without saying, of course – but it surely comes with the drawback that the reform process is hard to ‘read’ and even harder to foresee in its actual implementation. It is also difficult to ‘correct’ the process from outside, which is one reason why a partnership in a deep and comprehensive FTA might be of mutual advantage to both China and the EU.

11.3.2 Access to and national treatment in Chinese services markets – A survey

In reading the large Table 11.1 below, it should be realised that it mainly focuses on mode 3 (FDI) and hardly on mode 1 (cross-border services between the EU and China, which have frequently remained ‘unbound’ in GATS commitments, although in some selected services such as transport, travel and a few other ones, cross-border trade has developed). Likewise, there is less attention given to mode 4 (cross-border movement of natural persons for temporary services, such as professionals and intra-corporate transferees). Furthermore, horizontal issues such as IPRs and public procurement, which may matter for services of course, are not dealt with here (see chapters 12 and 13). There are other issues of direct interest to (here) EU service providers in China that are not or only occasionally dealt with, such as transparency and the rule of law aspects, and broader (non-discriminatory) overregulation of sectors, which are sometimes discussed in column 5 of Table 11.1 under the notion of ‘reforms’, as they tend to be a legacy of the planned economy. This also leads to suggestions for (more) EU-China cooperation that go beyond access and national treatment questions. Table 11.1 reflects the formal GATS commitments of China from 2001, supplemented by the numerous details of the application of these commitments or of the discretion left, drawn from the very extensive reporting of the European Chamber of Commerce in China and from the last three detailed Trade Policy Reviews by the WTO (2012, 2014 and 2016).

Table 11.1 Sectoral access to and national treatment in China's services markets – A survey

Sector	GATS commitments	Market access (FDI, unless otherwise indicated)	National treatment (Discrimination of the EU and foreign firms)	SOEs & anti-trust	Other aspects or comments
1. Aviation	Outside GATS, except repairs (China allows this but as JVs, with an economic needs test and only for international services)	Mode 3 access, with severe restrictions (e.g. JVs in repair or some other secondary air services only; Mode 1 is outside GATS, in 2017, a relatively liberal Air Services Agreement (ASA) was concluded between the EU (rather than the member states) and China; recent China ASAs are more liberal ; there is considerable EU-China cross-border trade ; the domestic market is closed.		SOEs dominate but private domestic entry is now active.	There is a great need to enhance technical and regulatory cooperation .
2. Construction services	JVs with wholly foreign ownership are allowed	JVs with EU owners can only operate in four rather limited market segments; EU service providers do not receive full recognition ; despite all this, FDI in construction is substantial .	Capital requirements for JVs in construction differ from domestic firms; access to projects is restricted for FIEs in construction; the types of contracts create subtle barriers; there is unequal participation in standards development between Chinese and foreign firms; foreign investors in real estate face major hurdles; considerable barriers exist in licensing, registration and qualification regimes.	M&A for local companies through FDI is suboptimal.	There is a proposal for a joint research centre on integrated urban planning solutions with Chinese characteristics ; there are also reform requests, possibly through cooperation/dialogue; China's construction market is becoming more competitive and is the largest in the world – 56 of the top 300 construction firms are Chinese (2015); the European Chamber in China proposes a 'pre-establishment national treatment plus negative list' (2017)
3. Distribution services	Commission agents and wholesale activities (excl. salt & tobacco): mode 1	See the GATS commitment column.	Online retailing (a sector with explosive growth) is in the restricted category of the Investment Catalogue; the		Retail generates 9% of the Chinese economy; foreign investors are very active as both wholesale/agents and in retail;

	unbound; mode 3 as JVs with foreign majority ownership; retail mode 3 is less and less restricted by a time schedule, but some restrictions are permanent, e.g. JVs only and no more than four of them; there are some restrictions for chain stores with more than 30 outlets.		required ICP licence falls under telecoms administration measures; franchising, on the other hand, was removed from the restrictive category in 2011.		of the 4,266 foreign invested firms (in late 2010), 70% were wholly foreign-owned; crucial are the 360 department stores and 160 large supermarkets, including those owned by EU firms, with altogether a million workers; online retail remains difficult for foreign entrants, with a joint market share of the two leading incumbents (Taobao.com and 360buy.com) of 46% of the market (2011), while Amazon.cn reached 2.3%.
4. Environmental services	Extensive commitments on access (mode 3) in segments such as sewage services, solid waste disposal services, cleaning services of exhaust gases, noise abatement services, nature & landscape protection services, sanitation services and others; JVs are compulsory but with foreign majority ownership.	Since the 2011 version of the Foreign Investment Catalogue, FDI in environmental services has been 'encouraged' by the government, except in some categories (e.g. heat supply and water drainage networks in cities); also note that the GATS commitments (second column) neither includes environmental quality monitoring nor pollution source inspection, which was still the case in 2012 (latest information).	Though mode 3 in most environmental services is relatively liberal, ASEAN and other FTA partners of China have obtained the option of fully foreign-owned enterprises.		The sector is growing very rapidly; the Chinese government is massively investing in equipment, infrastructure and services, and designing regimes that should attract foreign investors and service providers (reasons include diversification of the types of operators, advance marketisation and import of state-of-the-art technologies); for sewage and solid waste, infrastructure projects can be in the form of build-operate-transfer.
5. ICT services	<i>Note:</i> In 2001, ICT services and telecoms clearly separated, unlike today, with many new services and new technology; in 2001 these were	Localisation requirements exist for (personal) data processing (acting as a cost-barrier to EU ICT firms and EU banks); for e-commerce, FDI restrictions have been lifted and this directly facilitates services.	China mandates indigenous technology without global harmonisation; some technology committees in ICT standardisation do not allow FIEs despite SAC regulations; 'technology-neutral' is violated; cloud	Independent non-state laboratories are not allowed to conduct testing & certification; there are not yet clear open accreditation (rules) for	Certification in ICT (may) deviate from international norms; even 'source code' may be required, which is highly intrusive; several of these issues are linked to WTO TBT issues and (lack of) TBT notifications; ICT R&D cooperation between

	called 'computer and related services'; of the four main services then listed, two have no limitations on market access or on national treatment (installation of computer hardware and data processing) and one still has mode 3 restrictions (only JVs but with foreign majority ownership for software services; after a period, wholly owned subsidiaries are allowed in maintenance and repair services).		computing is not really open; licensing for services using encryption technology is de facto prohibiting foreign-owned business in China and deters FDI; there are discriminatory procurement restrictions of the Multi-Level Protection Scheme (MPLS); MPLS rules are far too broad, throttling competition; all 1,200 services products having obtained licensing by the Office of the State Commercial Cryptography Administration (OSCCA) are solely developed by Chinese companies; all 687 companies having a sales licence are Chinese; national (non-harmonised) algorithms can be applied, pushing out EU firms (e.g. mobile payments).	independent laboratories.	the EU and China needs to be strengthened; suggestions to open up China's Value-Added Telecoms Services to foreign investment.
6. Logistics (including express delivery)	In 2001, logistics was not recognised as a sector in GATS commitments.	In 2015, logistics was an 'encouraged' FDI sector in China (with fast growth); China correctly defines logistics as integrated services (in various modes) of transport, warehousing, freight forwarding and IT.	Operation permits for express delivery are excessively costly, due to repetitive approvals, city after city; in some cases, domestic investors in express delivery receive preferential treatment; OECD restrictiveness index for courier services is exceptionally high (almost 1, i.e. unusually tightly regulated, without obvious justification).	One SOE (China Material Storage and Transportation Co.) is the market leader but competition is strong and growth is rapid; among the top 50, 18 were SOEs in 2009 and 6 were foreign invested; the market share of the 6,400 foreign logistical firms at the end of 2011 was 22%;	A degree of overregulation of express delivery persists due to security concerns; other technical, customs and VAT issues hinder 'trade facilitation'; in addition is legal uncertainty; China should implement the new WTO Trade Facilitation agreement actively as it would help.

				Schenker was the Olympics official logistical company; the Big Four in express delivery have a major presence in China.	
7. Maritime transport	There is a basic commitment only for international freight and passenger transport (mode 1); mode 3: JVs allowed a maximum of 49% foreign ownership and the Chinese side appoints the board chair and general manager; on crews (cf. mode 4), there is no commitment; national treatment applies except in mode 4; nine ancillary services at ports are made available.	Less than 49% of foreign-owned firms are allowed in maritime, but the Chinese flag on ships is compulsory; inland shipping is forbidden for foreign firms.	'International relay' (international cargo between Chinese ports) is only for wholly Chinese-owned vessels (inefficient); it is relaxed in new free trade zones (FTZ) but only if the ship ultimately is Chinese-owned (seen as a new disadvantage).	Monopolistic port groups disallow free terminal choice and may abuse their power.	High surcharges are surrounded by rule of law issues; European maritime shipping companies suffer from serious inefficiencies due to the ban on international cargo transport between Chinese ports, and this should be relaxed.
8. Professional services	8a) Legal services: Chinese law practice is excluded; there are considerable restrictions for the limited remaining scope, e.g. international clients; 8b) Accounting and auditing: for mode 3 either JVs or wholly		Foreigners with CPA licences are accorded national treatment.		

	<p>owned but solely for CPAs licensed by the Chinese government; in an additional commitment, JVs can also have non-CPAs among their staff;</p> <p>8c) Architects/ engineers: mode 3 is no longer restricted, albeit that architects and engineers ought to be registered as such in their home country;</p> <p>8d) Medical/dental: JVs as hospitals/ clinics with majority foreign ownership, but in line with China's needs, and with a majority of doctors/staff being Chinese.</p>	<p>Mode 4 is quite flexible (but always as 'consultants').</p>	<p>Individual architects are treated as 'consultants' and cannot become Chinese-registered architects - they have no access to the Chinese examination to become one.</p>		<p>A mutual recognition agreement for architects could be beneficial, as shown by MRA agreements with Macao, Taipei and Hong Kong.</p>
<p>9. Quality & safety services (referred to as TICs in China)</p>	<p>In 2001, these were still in a rather limited form as 'technical testing and analysis services' (i.e. no certification) and for scientific analysis serving offshore oilfields; wholly owned technical testing firms are permitted (after a period), if also engaged in this business in their</p>	<p>The 2015 Foreign Investment Catalogue removed TIC from the 'restricted' category; however, licensing and certification qualifications - so far - are only for Chinese firms; it is extremely hard to become an 'auditor' or 'inspector'; see chapter 15 on the BIT/CAI.</p>	<p>There are severe limits to market opening to foreign TIC providers and of 'recommended laboratories' as one of several administrative measures (adhering, so-called, to 'national treatment') to prevent or severely limit market opening to (foreign) TIC providers; frantic new regulation of the TIC market is occurring without real reform; this is leading to EU-China trade conflicts; heavy</p>	<p>SOEs are (super) dominant, based on heavy controls by AQSIQ; certificates are not always trusted in China (causing doubts about whether the many controls really serve safety).</p>	<p>The reform of the TIC of February 2014 is not (yet) forthcoming; there is fear of public control being replaced by private monopolies; (possibly) EU-China cooperation could make the 'market' work rather than excessive administrative controls (while still having safety scandals); reforms in TIC also seem to lack a legal basis.</p>

	home country; for offshore oilfields, this is only in cooperation with Chinese partners.		and superfluous administrative controls – an apparent legacy of the planned economy – disadvantage the market-based world class EU TIC industry with world TIC standards.		
10. Telecoms (now eComms including digital services) [see also ICT sector, above]	In 2001, these were still based mainly on fixed and mobile (+ fax), though packet-switched services were covered; mode 3 in basic telecoms with only 49% JVs; ‘value added’ services, such as email, voice mail, EDI and online data processing, <i>idem</i> , albeit that JVs can now be 50% foreign-owned.	ICT FDI access, including R&D units, well developed; seven out of eight value-added services are open in the Shanghai zone (not yet in China); e-commerce is fully open, but there are localisation requirements for (personal) data processing (acting as a cost barrier to EU ICT firms and EU banks); 34 JVs on basic telecoms with between 20% and 50% foreign ownership have obtained licences, with considerable restrictions.	There is no equal treatment for foreign service providers; the 5G group are not open to wholly foreign-owned firms or FIEs; licensing remains problematic (e.g. basic telecoms mode 3 is only 49% foreign-owned); security-related rules discriminate against foreign IT products; licensing for services using encryption technology is de facto prohibiting foreign-owned business in China and deters FDI; there are discriminatory procurement restrictions of the MPLS; MPLS rules are far too broad, throttling competition; all 1,200 services products having obtained OSCCA licensing are solely developed by Chinese companies; all 687 companies having a sales licence are Chinese; national (non-harmonised) algorithms can be applied, pushing out EU firms (e.g. mobile payments).	Telecoms (basic, fixed and mobile) are super dominated by an SOE oligopoly, de facto a monopoly with 98% or 99% market share; the SOEs have been partially privatised, with today’s state-ownership ratios of some 63–74%, the remainder being usually foreign-owned through holdings on the Hong Kong stock exchange; the upshot is that the market is nearly closed for effective entry; the mobile virtual network operator (MVNO) (a cost-effective solution to increase competition) is still not fully open to foreign firms.	Better dialogue is taking place on security-related issues; internet speed is still a major issue (due to infrastructure shortages as well as filters & controls of internet traffic); internet speed has negative effects on FIE business and business models as well as on R&D by EU firms in China. Note that the 2013 friction between China and the EU on telecoms was about telecoms equipment (hence, goods and not services), e.g. on export credits to Huawei and ZTE and on discrimination in public procurement bidding for large telecoms infrastructure projects in China (see the chapters on public-private partnership and competition).

<p>11. Banking & securities</p>	<p>Mode 1 is extended only to non-core financial services (like data processing, portfolio research, etc.) and foreign currency business upon local FDI; criteria for authorisation is solely prudential (no 'needs' test) and JVs are preferred (see access).</p>	<p>Foreign banks are subject to rigid market access restrictions (ownership and business scope); there is a single foreign owner maximum of 20%, which is 25% for all foreign; foreign ownership in JVs for securities is now 49%, but the business scope is restricted to underwriting and distributing securities (and not all shares can be traded); multiple, simultaneous branch expansion is not allowed.</p>	<p>Bonds underwriting de facto discriminates against foreign firms; foreign banks face difficulties in funding genuine trade-related finance (due to foreign debt quotas and guarantees); access to China's Foreign Exchange Interbank market is de facto restricted; there is access to Chinese stock exchanges as special members.</p>	<p>Although there are 1,000 foreign banks in China (as of end 2014), with 563 branches in 69 cities, the very low market share of these many banks together has steadily decreased from 2.16% (2008) to 1.62% (2014); in 2015, this fell again to 1.38%; Chinese (SOE) banks do not (have to) fear effective competition from foreign entrants.</p>	<p>Obtaining new bank licences is very cumbersome, but exit is harder still; these exit barriers are a huge deterrent; total lack of reciprocity has powerful economic effects in that Chinese banks grow rapidly in China and in the EU, whereas EU banks in China cannot.</p> <p>However, the huge stock of non-performing loans has been reduced drastically; China follows Basel III for prudential regulation; a draft deposit insurance scheme is underway; European banks insist on opportunities for both non-organic and organic growth in China; in the new Free Trade Zones (e.g. Shanghai and 10 other ones), new approaches are tested with a negative list on restrictions on commercial presence and a positive list for cross-border commitments in financial services.</p>
<p>12. Consumer & non-bank finance (e.g. motor vehicles)</p>	<p>Mode 1 is restricted; FDI is 'free'.</p>	<p>No restrictions and reform is ongoing; online entry is easy and pro-competitive.</p>	<p>Very high financial thresholds exclude de facto even top-quality non-bank financial institutions; direct financing or guarantees from their foreign shareholders are not possible.</p>	<p>SOEs still dominate but entry (e.g. online) is pro-competitive.</p>	<p>Lack of regulation of this peer-to-peer market and the underdeveloped credit risk system in China has to be tackled urgently; it is critical for supporting consumption, which in turn is key to China's re-balancing.</p>

13. Insurance	Mode 1 only covers the insurance of international activities (e.g. transport); foreign non-life insurers are no longer restricted and have full business scope; also, re-insurance is free; for life insurers, JVs with 50%; FDI in brokerage of large commercial risks can be wholly foreign-owned.	Foreign ownership of health insurance is 50%; property insurance 100%; foreign insurers are banned from operating pension funds.	Re-insurance is formally open, but in fact subject to an arduous and long approval process; a de facto brake exists on branching by foreign insurers; bank/insurance combinations are restricted, implying that domestic banks will elect to cooperate only with domestic insurers (key for distribution & branching); online insurance sales cannot go out-of-province (which disadvantages EU players with few branches).	The market share of foreign insurers is 'limited', but higher than for banks (4.5% in 2014; for life, 5.8%) and growth is much faster than for banks (no less than 23% in 2014); the top five insurers (all Chinese) have a market share of 70% (life) and 75% (non-life).	Many reforms are underway or announced; the pension system is in its infancy; EU-China cooperation might be helpful; there are CAI/BIT matters for this sector (see chapter 15).
14. Private equity, securities & strategic M&A	Mode 1, foreign securities institutions may directly engage in B share business; mode 3, offices of foreign securities institutions may become special members of all Chinese stock exchanges; JVs with 49% for the domestic securities investment fund management business; for underwriting A shares and underwriting and trading B and H shares as well as corporate and government debt, or	The main concern is that the new draft of the Foreign Investment Law (FIL) is whether it allows more and secure FDI access; the 'national security review' is excessively broad, extending to non-risk sectors (agro, transport, etc.) and with very vague clauses – and seriously risks being abused for protectionist purposes; the (new) Qualified Foreign Institutional Investor option introduces greater access possibilities and the high thresholds for entry have been lowered significantly.	FIL claims to realise 'national treatment' (if not on the negative list, introduced in FIL); but (a) foreign exchange control is still in the way; (b) variable interest entities (esp. in ICT) are subjected to serious uncertainty; (c) indirect transactions are now classified as FDI; (d) the threshold for approvals are a denial of national treatment for FDI; (e) the approval process applies many, and at times vague, criteria; (f) there is no appeal; (g) other regulations (than FIL) have to be reviewed, so that national treatment works; the equity transfer involving SOEs is very heavy; for FIEs;		Deep reform of SOE sectors, to withdraw from 'non-strategic' sectors, is hardly or not happening (still, in e.g. hospitals, real estate, retail), and SOEs continue to benefit from subsidies (through cheap finance) and favouritism; despite favours, their productivity is only about half of private firms in China; moreover, SOE dominance reduces market functioning.

	<p>launching of funds, JVs are required with a max of 33% foreign ownership; the criteria for authorisation are solely prudential, e.g. no economic needs test or quotas; no limitations exist on national treatment in modes 1 and 3.</p>		<p>there are still many restrictions for FIEs seeking to enter the Chinese capital market.</p>		
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Sources: Authors' own elaboration based on 2001 GATS commitments by China published by the WTO, the European Chamber of Commerce in China (2015 and 2017) and the WTO's Trade Policy Reviews on China for 2012, 2014 and 2016, respectively.

11.3.3 On Chinese access to the EU services markets

Although the STRI indexes and the AVEs for (access to) the EU services market are much lower than those for access to the Chinese services markets, there are some exceptions and one or two ‘oddities’, and it is not a priori clear what is behind them. It will not be possible to fully resolve each and every puzzle behind the STRIs and AVEs. Moreover, the Chinese complaints are overwhelmingly about goods, with only rare remarks on some services.

What follows below is a summary of what the WTO’s Trade Policy Reviews on the EU write on access to the EU services market in 2017, 2015 and in 2013. It concerns the following sectors: financial services, environmental services, air transport, maritime transport,¹⁰⁵ telecoms services, audio-visual services and distribution services (retail, wholesale and car/motorcycle repair). A general point in financial markets is worth stressing beforehand: the actual regulatory requirements after the deep and comprehensive financial market reforms between 2010 and 2014 have had two effects. One is a significant harmonisation effect (as many member states’ exceptions or deviations are now ruled out) and the other is a greater stringency effect, that is, it is now less easy to enter and operate in the EU when the home regime is not at the international standard level as well.

¹⁰⁵ Rail and road transport are not included, being irrelevant as they are today for EU-China trade. Perhaps the BRI, also known as the One Belt, One Road project and the AIIB, might change that in (say) ten years from now, but at best only marginally given the huge maritime volumes of trade. Pipeline services have also been left out.

Table 11.2 Third-country (China's) access to EU services markets – A sketch

Sector	GATS commitment	Actual access policy	Comments
1. Maritime services	This is 'somewhat limited' (the EU withdrew a liberal offer in 1995-96 due to lack of reciprocity by many WTO partners).	The applied regime (largely governed by member states!) is 'very liberal'; an EU-China maritime bilateral has been in force since 2008.	Cabotage is reserved for EU flagships (a widespread practice in the WTO).
2. Air transport	GATS does not deal with ASAs (air services agreements on landing rights and seven freedoms); only three secondary services are under the GATS air transport annex, i.e. maintenance & repair, ticket selling, computer reservation systems; four more are offered by the EU under Doha, i.e. ground handling, airport management, storage & warehousing and freight agency services.	The actual access of airlines depends on bilateral ASAs (as noted, first EU-level ASA with China concluded in 2017); outside GATS, the EU regime on FDI in air transport services is liberal, except on airlines (given an EU ownership clause – again, common practice with WTO partners).	Hence, there is some scope for FTA-improved access in all secondary services; for airlines (new?), the new EU-level ASA is critical.
3. Environmental services	All environmental services are covered by GATS commitments (waste water treatment, solid & hazardous waste management, air & noise pollution abatement, nature & landscape protection); also mode 3 is covered.	In FTAs with the EU, access is slightly more open (e.g. selected member states allow more FDI).	Large and growing, this is a promising sector for the EU, with a turnover of some €300 billion.
4. Telecoms services	A very detailed survey of new rules by the EU; the EU adheres to the WTO telecoms reference paper of 1997.	There is an extensive EU rules-based regime, but national regulatory authorities (NRAs) and network characteristics still fragment the single market considerably; this reduces economic access possibilities.	Member states still have some discretion, e.g. through NRAs but also through state-ownership (although sharply reduced since the late 1990s); for example, the dominance of Deutsche Telekom has been retained, e.g. in the local loop and broadband, and despite the advice of the German Monopoly Commission to sell off, the government still holds direct and indirect stakes (through a state-owned bank).

5. Audio-visual services	Broadcasting is an exception; there are no EU GATS commitments.	De facto actual access/openness is considerable, with high market shares for non-EU firms (read the US – on films, video and TV programmes); there are some EU and member state aids to broadcasting and EU production of contents (some €3 billion of all member states plus the EU).	Due to convergence in digital services, the restrictive broadcasting rules have less effect than in the past and alternative consumption of audio-video services has increased rapidly, without any boundaries.
6. Retail, wholesale, car repairs	GATS commitments are very substantial and cover all types of distribution and all products (except tobacco, firearms and medicines), except ‘procedures’ for establishment.	The EU Services Directive (2006/123) has had a positive effect <i>erga omnes</i> ; WTO scores on services trade (out of 100) are high: 72 for GATS commitments and 88 for the best FTAs; local and national restrictions (environment + location) can be problematic, but are not discriminating for non-EU entrants.	This is a very large sector (with turnover some 11.2% of EU GNP); inwards and outwards FATS are huge (respectively €1,156 and €881 billion in 2011) (FATS refers to foreign affiliates’ trade in services, i.e. local services supply of subsidiaries).
7. Financial services	GATS commitments by the EU are derived from the 1997 WTO Understanding on Commitments in Financial Services; basically, these are quite open (provided that regulations are adhered to or ‘equivalence’ of the home regime is recognised by the EU) but there are numerous smaller or highly specific reservations by EU member states.	Actual openness is reflected, for example, in 1,022 foreign controlled (non-EU/EEA) subsidiaries and branches (in 2011) in banking; there were 45 branches of third (non-EU/EEA) countries in insurance in 2011. Foreign-owned subsidiaries can benefit from a ‘European passport’ covering the entire internal market (all financial services sectors).	For mode 1 (cross-border services), third countries’ suppliers can benefit from ‘equivalence’ of their home regulatory regimes; if equivalent, they can continue their activities, also after the 2010–14 reforms; (early 2013) examples include: <ul style="list-style-type: none"> • IFRS accounting principles; four countries including China; • anti-money laundering, 13 countries, including China; • credit rating agencies; four recognised countries and another six for ESMA advice, including China; and • statutory audits; there are three separate aspects of equivalence here and in all three, China has ‘equivalence’ recognised by the EU.

Notes: For GATS commitments, see Table 11.1.

Sources: Authors, and WTO (2013, 2015 and 2017).

11.4 Potential value added of an EU-China FTA, based on prior experiences

After the detailed attempt to understand market access and local restrictions for the services modes, especially in China, is it possible to provide some guidance on the substance of a possible EU-China FTA? Although Table 11.2 (Chinese access to the EU services market) is also relevant, the following discussion focuses on the degrees of ambition for China. These ambitions are not known, as no such policy documents are available to the knowledge of the authors; moreover, China has been opening up cautiously and is engaged in reform processes, so the ambition to open up and commit in an FTA is likely to increase over time, at least somewhat.

With the help of Table 11.3, the scope and nature of possible commitments is gauged. Table 11.3 reports on two FTAs that may well be indicative for the scope and nature of possible commitments by China on bilateral services trade. The FTA recently concluded between the EU and Vietnam is widely held to be a benchmark for what is possible between the EU and developing countries. China is already more developed than Vietnam, but is in several respects certainly characterised by large-scale development needs. The country sees itself still as a development country, albeit a middle-income one. The FTA between the EU and Vietnam should therefore be a feasible benchmark for an FTA between the EU and China in services. The recently concluded FTA between China and Korea is probably the 'deepest' FTA concluded so far by China and can be regarded as expressing the current ambitions of China in services. These new ambitions go beyond what China has thus far been willing to liberalise in FTAs.

Table 11.3 Services modes in recent FTAs relevant for an EU-China FTA

Aspects	EU-Vietnam	China-Korea	Comments
Combined with investment?	Yes, there is a lengthy chapter on services, FDI, investor-state dispute settlement (ISDS), mode 4 and e-commerce.	No, these are separate chapters, but Art. 12.8 (of the investment chapter) confirms and specifies the linkages with investment for services in general and for financial services “to the extent that they relate to a covered investment”.	On China-Korea, there is no explicit linkage for telecoms (chapter 10) (presumably because FDI is assumed).
Sectoral (sub)chapters (See also the Schedule of Specific Commitments)	<ul style="list-style-type: none"> • Computer services • Postal services • Telecoms • Financial services • Maritime (international) • e-commerce 	<ul style="list-style-type: none"> • Financial services • Telecoms services • e-commerce 	
Liberalisation technique	Positive listing; there is a schedule of specific commitments.	Positive listing; there is a schedule of specific commitments (and later additional ones, to be negotiated).	
Cross-border services: Market access	Market access by prohibiting three types of limitations (the number of suppliers, total value of service transactions and the number of service operations).	Market access by prohibiting six types of limitations (see the three from EU-Vietnam, plus the number of natural persons involved (and no economic needs test), specific types of legal entity or JVs, a maximum % limit of a foreign shareholding).	China-Korea is considerably more liberal than EU-Vietnam.
Cross-border services: National treatment	There is a standard national treatment clause for ‘like’ services and suppliers.	Idem as for EU-Vietnam	Hence, possible differences between the FTAs are found in the schedules of specific commitments and the conditions for each service sector granted national treatment.
Cross-border services: Most favoured nation treatment	There is MFN treatment in ‘like’ situations.	No MFN	

Domestic regulatory commitments	There are largely standard clauses (e.g. on licensing) on impartiality, speed, reasonableness, etc., for modes 1, 3 and 4; it encourages MRAs for professional qualifications. Note that there is a separate chapter (18) on transparency.	There are largely standard clauses on impartiality, speed, reasonableness, etc. for modes 1, 3 and 4; separate articles on transparency (Art. 8.8) and 'recognition' (including an 'agreement', Art. 8.9).	
Competitive safeguards	These are in the telecoms section V of chapter 8. Note that the FTA has a chapter (10) on SOEs that is far more general.	There is a "monopoly and exclusive service suppliers" clause (Art. 8.12); no abuse of its monopoly position (outside the scope of monopoly rights); remedies are weak: the other Party is to "provide specific information", or, "consultations" in case of subsidies; there is also an Art. 8.15 on restrictive business practices. Note that the China-Korea FTA has no chapter on SOEs.	It would seem that the overall setting of pre-empting or correcting anti-competitive conduct is rather 'soft' in the China-Korea FTA and somewhat stronger for EU-Vietnam.

Note: Schedules of specific commitments are not included or assessed in this table.

Source: Authors.

Table 11.3 shows that – if these two FTAs are any guide – an EU-China FTA could considerably improve market access and (‘national’) treatment of services and suppliers from the EU in China. Table 11.1 demonstrates that there are serious restrictions (including anti-competitive oligopolies) in sector markets like telecoms and financial services. Both of these are addressed in the EU-Vietnam and the China-Korea agreements. The latter’s Annex 8-A-2 (Schedule of Specific Commitments) for China shows limited degrees of market access, e.g. in telecoms and financial services.¹⁰⁶ Still, as the first item in Table 11.3 shows, Korea and China have agreed to postpone investment negotiations on market access to 2017 and cross-border services are not subject to MFN. On horizontal issues like transparency and competition policy, the China-Korea FTA is distinctly weak. Perhaps this may not be surprising as it signals the clear defensive interest of today’s China. An even greater sensitivity, so it would appear, is the lack of an SOE chapter in the China-Korea FTA. Such a chapter with effective and binding guarantees would undoubtedly be an offensive interest of the EU. Dependent on Chinese reforms, this might turn into a major issue, or not. One might suggest that the SOE chapter in the EU-Vietnam FTA is a modest benchmark. In an EU-China FTA, such a text for SOEs might be accepted as a first step in a ‘living agreement’. In this respect, the China-Korea FTA has an Annex 22-A entitled “Guidelines for subsequent negotiations”, aiming at achieving high-level liberalisation for trade in services and investment, based on a ‘negative list’ approach! According to Art. 4 of this annex, the structure would become a copy of CETA¹⁰⁷ in this respect. But even with a negative list approach, liberalisation critically depends on the negative list itself. Whether and when China, given its reform process, will be ready to accept an SOE chapter with meaningful discipline, too, in a possible FTA is not clear at the moment. In short, China will travel the FTA path step by step and the China-Korea FTA is the latest example of that.

¹⁰⁶ For more extensive assessment, see Schott, Jung & Cimino (2015).

¹⁰⁷ See chapters 10, 118 and 35 (9 and the relevant (extensive) annexes) of CETA.

12. Public procurement

The EU and China have very divergent regimes for public procurement. The EU adheres to the plurilateral WTO Government Procurement Agreement (GPA). China implemented a public procurement regime only after its WTO accession. It has submitted so far six offers since December 2007,¹⁰⁸ in accordance with its WTO Accession Protocol, in order to become a GPA member.¹⁰⁹ So far, these offers have not been accepted as sufficient for the purpose. The negotiations are still ongoing. Essentially, China is closed to foreign competitors bidding for public procurement contracts, except in cases of shortages of technology or otherwise. Overall, the eligibility of foreign competitors to bid for public procurement contracts is unclear due to conflicting provisions contained in different laws, as well as differences observed between law and practice.¹¹⁰ Chinese companies have a much easier time in the EU and do obtain contracts in the public procurement market. China has concluded 1513 FTAs¹¹¹ but in none of them has public procurement been incorporated.¹¹² Market access for public procurement is not found in any other bilateral, regional or multilateral agreement signed by China.

Europeans ought to realise that China is keen to implement a public procurement system as a means to eliminate corruption and to use public funds more effectively, but the concept, in its view, is less related to market access. Therefore, for China public procurement is perhaps first of all an issue of domestic economic reform.¹¹³ Nonetheless, the idea of negotiating an FTA between the EU and China would be next

¹⁰⁸ The six Appendix 1 offers were submitted by China in December 2007, July 2010, November 2011, November 2012, December 2013 and December 2014, respectively.

¹⁰⁹ The GPA is negotiated at two levels, i.e. plurilateral and bilateral. For the former, the question is for all current GPA Parties and China to reach an agreement as to the entities and types of procurement that China will offer to comply with the GPA provisions. For the latter, in the context of EU-China trade relations, it aims to improve market access for the supply of goods, services and works from EU to China and, at the same time, to establish a transparent, accountable and efficient acquisition process to ensure an environment of 'value-for-money' for Chinese consumers/taxpayers. In an FTA, one would expect the formal extension of the open and competitive regime of the EU to Chinese firms, also when bidding from China itself.

¹¹⁰ For example, Art. 10 of China's Government Procurement Law stipulates "buy national" for all types of procurement, goods, services and works. At the same time, the Implementing Regulations of the Government Procurement Law do not distinguish between foreign and domestic suppliers; neither does the Tendering and Bidding Law, which is applicable to procurement of construction works, including construction-related procurement of materials and equipment. In reality, as reflected in each WTO Trade Policy Review on China (2008-2016), the Chinese government has asserted that it has applied non-discriminatory and equal treatment in government procurement and that it routinely purchases foreign products, but that no statistics in this respect were available. See also Annex II. Public Procurement in China and the EU.

¹¹¹ Available from the China FTA Network website (<http://fta.mofcom.gov.cn>).

¹¹² The text of the China-Georgia FTA and the China-Maldives are not yet published at the time of writing.

¹¹³ See Annex II for a detailed analysis on China's public procurement regime.

to impossible if China would continue to leave out public procurement in its FTA negotiations. The EU is only interested in 'deep and comprehensive FTAs' and public procurement is a key element of such FTAs. Should China join the GPA in the next one or two years, the FTA issue would be whether and to what extent the parties can reach agreement on the GPA-plus elements. In addition, there are likely to be questions of proper implementation. For these reasons, the present chapter will mainly deal with the Chinese regime of public procurement and market access, and much less with that of the EU.

In the context of EU-China trade relations, public procurement is a sensitive area because of the huge potential of business opportunities present in the Chinese market. The official Chinese interpretation of the public procurement market in China covers only 2.7% of GDP in 2014¹¹⁴ (RMB 1,731 billion, or €240 billion) while typically this is likely to be in the range of 15–26% in any other economy. In the EU, public procurement accounts for 16%¹¹⁵ and the European Chamber of Commerce in China quotes sources holding that all public procurement including that of SOEs and military amounts to some 35%! The sensitivity of the subject is also caused by the lack of reciprocal treatment: whereas EU business faces major obstacles and buy-China policies in China, Chinese companies enjoy a relatively open EU market as far as public procurement is concerned.

It is noted that, although negotiating a GPA accession would be another milestone in China's march from a planned to a market-oriented open economy, China has its own, somewhat idiosyncratic perception towards public procurement. Given the overwhelming influence of the state in the past and to a degree still today, public procurement to Chinese law-makers is not seen as a component of trade, but a drive for budgetary control and discipline. From the outside, this is less than obvious because it was the country's WTO accession that prompted China to promulgate its first Public Procurement Law in 2003. Budgetary control is the reason why public procurement is under the reins of the Ministry of Finance (MOF), and fiscal funds will trigger the application of procurement rules. Secondly, unlike the objective of the GPA, which is to ensure openness, fairness (e.g. non-discrimination) and transparency, the purpose of imposing public procurement rules for China is to standardise government procurement practices, and improve the efficiency of government procurement funds, safeguarding national and public interests, protecting the legitimate rights and interests of the parties in government procurement and promoting clean government.¹¹⁶ It is evident that the EU and Chinese approaches have completely different points of

¹¹⁴ A Brief Summary of National Government Procurement in 2014, Ministry of Finance, 30 July 2015. Available at http://gks.mof.gov.cn/redianzhuanti/zhengfucaigouguanli/201507/t20150730_1387257.html. Nonetheless, this figure covers only procurement by government departments, institutions and public organisations using regular budget funds, for goods, construction and services listed in the Centralised Procurement Catalogue or above certain thresholds for procurement using other financial resources. The figure does not include procurement by SOEs, which according to China's Government Procurement Law does not fall under the definition of government procurement.

¹¹⁵ Available at <http://ec.europa.eu/trade/policy/accessing-markets/public-procurement/>.

¹¹⁶ Art. 1, Government Procurement Law.

departure: China has a strong tendency, so far, to isolate public procurement from competition from abroad (whether FDI in China or bidding from outside) and yet desires to adhere to the GPA, while European companies are often frustrated because of severely restricted access to procurement markets, knowing that Chinese companies do not encounter anywhere near such restrictive environments in the EU. Hoping to enforce the principles of reciprocity and non-discriminatory treatment in public procurement between the EU internal market and third countries, the Commission proposed an “international procurement instrument” on 21 March 2012, and then a revised version on 29 January 2016. Under the proposal, the Commission would be able to “punish” a country found discriminating against European companies in its procurement market by augmenting bids of goods and services submitted by the country concerned, thereby providing European and non-targeted countries' goods and services with a competitive advantage.¹¹⁷

12.1 China's offers to accede to the WTO GPA

12.1.1 *Trends of the six GPA offers: Widened coverages and lowered thresholds*

China submitted its sixth and the latest GPA offer in December 2014. The improvements, or concessions, made by the six offers were extensive and in three aspects, i.e. widened coverage of procuring entities and goods, services and works, as well as lowered thresholds.¹¹⁸ Additionally, China, in the last two offers, requests a three-year, instead of five-year, grace period to implement the GPA upon accession. Moreover, in China's sixth offer, activities in the fields of drinking water, electricity, energy, transportation, telecommunications and postal services are now offered for procurement coverage, which is a new development.¹¹⁹

¹¹⁷ The new instrument will only be applicable to procurement contracts above a certain threshold. Also, the scope of application can be limited to certain suppliers from the third country concerned, and its implementation to a select group of contracting authorities in each member state. For other details of the proposal, see “European Commission Takes Action to Open up International Procurement Markets”, Press Release, Brussels, 29 January 2016.

¹¹⁸ Also, compared to its initial offer when China requested a 15-year grace period for implementing the GPA after accession, the country in its fourth offer decided to reduce the grace period to 5 years and insisted to maintain its right to negotiate for transitional arrangements with regard to relevant obligations.

¹¹⁹ Under the General Notes of China's fifth GPA offer submitted on 6 January 2014, Art. 1(iii) states that the offer shall not cover procurement activities taking place in the field of drinking water, electricity, energy, transportation, telecommunications or postal services. This provision was scrapped in China's sixth GPA offer submitted on 23 December 2014 (derived from the Accession of the People's Republic of China to the Agreement on Government Procurement, Communication from the People's Republic of China, Fourth and Fifth Revised Offers (Restricted)).

For covered entities, from the first to the sixth offer, the coverage offered is widened from just 50 to 63 central government entities.¹²⁰ As to covered sub-central government entities, the number has increased from 14 offices, special organisations and organisations directly under the four municipalities and 15 provinces, to altogether 458, although with qualifications.¹²¹ Since China's second offer, a third category was added to covered procurement entities, called "other entities", to be subject to GPA rules. Entities such as the Xinhua News Agency and the Chinese Academy of Social Science are under this category. In China's sixth offer, the threshold for procurement of goods for "other entities" is 600,000 SDRs for the first and second year after GPA implementation (and 400,000 SDRs from the third year onwards), lowered from 900,000 SDRs, which was proposed in the second offer.

The list of covered procurement items has also been expanded considerably over the last six offers (see Annex II for details). In its first offer, China only offered those, for example, office consumables, classified in the Catalogue of Items Subject to Government Procurement contained in the Circular of Treasury as covered procurement items which were indeed narrow and limited, without meeting the GPA parties' expectations. Since China's second offer, the covered procurement goods are based on the United Nations Central Product Classification, subject to paragraph 1, Art. III of the GPA concerning security and general exceptions.

The procurement items covered are considerably extended as well. In its latest offer, China for example proposed to subject all goods procured by the covered entities to the GPA rules. As to services, the WTO Services Sectoral Classification List shall apply; and as to construction works the Division 51 of the United Nations Central Product Classification are offered, which is more than the scope set down by China's Government Procurement Law.¹²²

As to lowered thresholds, while thresholds are divided into those applicable to central and to sub-central governmental entities, thresholds were reduced from 500,000 SDRs (the December 2007 offer) to 200,000 SDRs for the first year and second year of implementation, then 130,000 SDRs from the third year onwards (the December 2014 offer) for goods as far as central government entities are concerned.

¹²⁰ Such central government entities include ministries and commissions under the State Council, special organisation directly under the State Council (i.e. SASAC), organisation directly under the State Council, offices (e.g. Research Office of the State Council), public institutions directly under the State Council and administrations and bureaus under the ministries and commissions (e.g. National Bureau of Energy).

¹²¹ For example, the procurement of construction services conducted by all the sub-central government entities using special funds of the central government are to be exempted from the Agreement. Also, China proposed that the GPA become applicable to the Group A sub-central government entities (i.e. four municipalities and seven provinces) after the Agreement takes effect for China, and to the Group B entities (nine provinces) three years after the Agreement takes effect for China.

¹²² Note that in China's first offer, only construction of buildings, offices and residential buildings were offered as covered works.

12.1.2 *European Companies' Grievance concerning limitations and departures*

Despite the above-mentioned extensive concessions China has made in its first six GPA accession offers, the limitations were still seen as heavy and some of them were against certain principles in the GPA, such as non-discrimination and transparency (with regard to offsets, for example). Foreign companies' grievances derive mainly from these objections. The general sentiment among the EU businesses in China is that the coverage should go even wider, while the thresholds should be lower.

In general, although qualifications may be expected in a GPA offer, or in other trade agreements, in fact one nagging suspicion among China's major trading partners vis-à-vis the country's GPA offers concerns transparency. Qualifications may sometimes be abused because of non-transparency, which will then lead to uncertainty and discriminatory treatment. Such consequences do not conform to the spirit of the GPA.¹²³

Secondly, for development purposes, domestic content, offset procurement or transfer of technology may be required in procurement (paragraph 5 of the General Note, sixth offer).¹²⁴ Certainly, these requirements may result in discriminatory treatment or non-transparency leading to departures from the GPA principles. Nonetheless, depending on the extent of the requirement included in each procurement contract, their adverse impact is arguable, especially concerning 'domestic content', which is a requirement causing much grievance among foreign companies. Coined as the 'global factory', many global competitive companies have set up their joint ventures in China long ago.¹²⁵ Since the Chinese government never provided any definition of 'domestic content', such requirement may simply imply supplying products manufactured at a joint-venture based in China which possesses competitive advanced technology and good value for money. For example, concerning the procurement contract for coaches for Shanghai Metro Line 3, the effect of 'localisation' – one of the key tendering requirements – was indeed limited since Alstom won the tender. The competition process was challenged only by Siemens¹²⁶ at the time, which had already

¹²³ For example, paragraph 3, point ii of the General Note in China's 6th Offer states that procurement rules shall not apply if "procurement is made by a covered entity on behalf of a non-covered entity". Because of the weakness in transparency, this provision may be abused if a covered entity is disguised as a non-covered entity in order to evade procurement rules.

¹²⁴ Technology transfer is not a new requirement, but it has existed since China implemented its opening-up policy in the late 1970s. At the time, China launched its campaign of "Four Modernisations", i.e. of science and technology, agriculture, industry and national defence, because the country was in serious need of foreign technology and investment in order to spearhead the economic reform. Alstom started its technology transfer to China in 1985, when China Railway ordered 150 "8K" dual-compartment electric locomotives.

¹²⁵ For example, in 1984, Alcatel-Lucent established Shanghai Bell Telephone Equipment Manufacturing Co. Ltd., which was the first foreign invested joint venture in China's history. To date, Alcatel-Lucent has established 12 joint ventures in China.

¹²⁶ Nonetheless, Siemens' failure to obtain the coach contract was unlikely to be related to 'localisation'. Before the tendering, a catastrophic derailing accident took place in Germany involving a Siemens

set up a factory in Nanjing prior to the opening of the tender. Note that Alstom has a presence in more than 20 entities in China with around 7,500 employees, and started technology transfer to China in 1985 (see also Annex II.)

Thirdly, until now China's Appendix 1 Offer did not include SOEs¹²⁷ as covered entities, as is the case under its domestic procurement law. The question of SOEs' coverage is of great concern to European companies, as well as to the EU as one of China's major GPA negotiating parties.

The grievance against Chinese SOEs being excluded from procurement coverage is that SOEs may nowadays appear as an enterprise or a holding company¹²⁸ after having experienced decades of reform through decentralisation, reorganisation, corporatisation and privatisation, but in reality still function as a governmental institution or commission, etc., with privileged access to public funds and government influence. If this is correct, SOEs should be offered as covered entities and fall within the remit of China's GPA Appendix 1 Offer.

However, identifying a reformed SOE as a governmental body is to ask whether it functions as a public body or whether it uses public funds. For the former, what matters is whether the SOE in question possesses, exercises, or is vested with, governmental authority, for which the WTO Appellate Body adopted a case-by-case approach.¹²⁹ As to the "public funds" test,¹³⁰ what matters is that the SOE enjoys privileged access to public funds for procuring goods and services on behalf of the

train. In the meanwhile, politics might have played its role. Siemens obtained both coach contracts for Shanghai Metro Lines 1 & 2 while Alstom's chances were thwarted as the French government sold arms to Taiwan at each occasion in the run-up to the contract bidding. Still, Alstom stood a higher chance of winning the procurement contract of Line 3 in view of the train accident and cleared political course.

¹²⁷ In China, SOEs consist of those wholly owned by the state (SOEs) and those in which the state has controlling shares (SCEs). The latter refer to enterprises in which the state, or another SOE, holds more than 50% of the equity; or, if the share of the equity is less than 50%, the State or another SOE has controlling influence on its management and operation. For the purpose of this article, SOEs mean SOEs and SCEs.

¹²⁸ For example, at the end of September 2011, 1,047 SOEs were listed on the stock exchange in Shanghai and Shenzhen, accounting for 44.7% of companies listed. See WTO Trade Policy Review, Report by the Secretariat, China, WT/TPR/S/264/Rev.1, 20 July 2012, para 222.

¹²⁹ The WTO Appellate Body adopted a case-by-case approach "by conducting a proper evaluation of the core features of the entity concerned, and its relationship with government in the narrow sense", since "the precise contours and characteristics of a public body are bound to differ from entity to entity...". See United States - Definitive Anti-Dumping and Countervailing Duties on Certain Products from China (DS379), Report of the Appellate Body, WT/DS379/AB/R, 11 March 2011, para 317.

¹³⁰ The OECD defines government procurement as the purchase of goods and services by the government for consumption and investment, but not for resale ("The Size of Government Procurement Markets", *OECD Journal on Budgeting*, Vol. 1, No. 4). It therefore correlates government procurement to "public funds". By the same token, under China's Government Procurement Law, fiscal funds trigger the application of public procurement.

government.¹³¹ If yes, the SOE in question is a government body and should be subject to procurement rules. As far as the GPA is concerned, entities at all levels of government hierarchy (including enterprises owned or influenced by government¹³²) may be considered as having privileged access to public funds and therefore are required to procure in accordance with the GPA rules. In China, however, public funds could include, or exclude, a few sources of funds, as mentioned in the beginning. Since the meaning of 'public funds' is different under the GPA and in China's practice, it is perhaps to be expected that the GPA and China's views do not match with respect to SOEs' role in public procurement. Besides, after having gone through constant reforms in the past three decades in China, many SOEs are no longer considered as such by the Chinese government, but rather as ordinary market players. The question is whether this is correct since independent studies show that SOEs still enjoy preferential policies, coupled with exclusive access to public funds. This might explain why China and its trading partners have such diverging views towards SOEs, and why China so far did not concede SOEs covered entities in its Appendix 1 Offer. As the Implementing Rules of the Government Procurement Law provides a new meaning to 'fiscal funds' and their application, it is yet to be seen how this development will affect SOEs' role in China's public procurement market.

There is equally the question of coverage with regard to affiliates of government undertakings,¹³³ which carry out commercial activities but enjoy privileged access to public funds at the same time. Usually, such affiliates are created by certain government undertakings in order to manage a specific sector of activities. In general, government undertakings refer to those functions in administrative capacity and are maintained by public budgetary or extra-budgetary funds. From the perspective of the GPA, it's not straight forward if they should be classified as SOEs and thus subject to government procurement rules.¹³⁴ The Korea Government Procurement case confirmed that the element of "being legally unified" is the key to determine if a government undertaking affiliate should be subject to government procurement rules, not the ingredient of

¹³¹ Kong Q., "Chinese Law and Practice on Government Procurement in the Context of China's WTO Accession", (2002) 11 *Public Procurement Law Review* 201.

¹³² Entities "owned or influenced by government" refer to SOEs or those undertakings that the state controls through a shareholding. In practice, undertakings that are run on a commercial basis are excluded. Art. XVII of the General Agreement on Tariff and Trade (GATT) provides that discipline on "state trading enterprises" required to run on commercial considerations does not "apply to imports of products for immediate or ultimate consumption in governmental use".

¹³³ In general, government undertakings refer to those functions in administrative capacity and are maintained by public budgetary or extra-budgetary funds. From the perspective of the GPA, it's not straight forward if they should be classified as SOEs and thus subject to government procurement rules. Such government undertakings include social organisations, for example trade union, women's federation, the Communist youth league, etc. as well as political parties, such as the Chinese Communist Party (CCP) and eight "democratic parties" under the leadership of the CCP and, public institutions.

¹³⁴ See Panel Report, *Korea – Measures Affecting Government Procurement*, WT/DS163/R, adopted on 19 June 2000, DSR 2000:VIII, 3541.

“government control”. This being the case, many of China’s government undertaking affiliates will neither be considered as SOEs, nor subject to procurement rules, since it is a common practice in China that, for state infrastructure investment, each new civil project sets up its own enterprise with a separate legal personality.

It should be noted, however, that affiliates of government undertakings in China conduct a huge amount of procurement contracts, especially in terms of public works, each year.¹³⁵ On top of that, although China’s Government Procurement Law arguably excludes SOEs from its scope,¹³⁶ procurement of works of state enterprises is *de facto* covered by the Bidding and Tendering Law – the national law applies to all tendering activities of works, public or private, conducted within the territory of China. As procurement activities conducted by SOEs are not regulated with precision in China, this could be the reason that the country inserted in each of its Appendix 1 Offers that “procurement with the aim of supporting small and medium-sized enterprises and promoting development in minority and poverty-stricken areas”¹³⁷ will not be subject to procurement rules.¹³⁸ This offset, nonetheless, suggests a departure from China’s national procurement law provision.

¹³⁵ It was reported that from 2000 to 2005, in the western region alone the Chinese government invested more than €100 billion in some 70 projects. A further €16.3 billion was spent in 12 projects in constructing railways, highways, hydraulic power stations, airports, etc. in 2006. The information was announced by China’s National Development and Reform Commission (NDRC) some-time ago, at www.sdpc.gov.cn/xwfb/t20060630_75020.htm, but the web link is no longer working and no further updated information is available.

¹³⁶ Art. 2 of China’s Government Procurement Law defines government procurement as those purchases made by state organs, institutions and social organisations at all levels by using fiscal funds and from the Central Procurement Catalogue or of which those value exceeds the respective procurement thresholds prescribed by the Catalogue for goods, works and services. As fiscal funds is the trigger for applying the procurement law, if an SOE can manage not to use fiscal funds while conducting public procurement activities then the law won’t apply.

¹³⁷ Paragraph 1.4, General Notes. China’s 4th GPA accession Appendix 1 Offer, November 2012.

¹³⁸ Art. 3 of China’s Bidding and Tendering Law requires that procurement of works, including procurement of relevant services (land inspection, design) and procurement of important equipment and materials used in such projects, must go through a tendering procedure if the construction project is as follows:

- [i] concerning public interests or public security such as large infrastructure, public utility and etc.;
- or [ii] fully or partially financed by state-owned or state-borrowed fund; or [iii] financed by loans or aid from international organizations or foreign governments. The detailed scope and scale of such works shall be decided by the relevant departments of the State Council. For works fall outside of the scope, relevant laws or regulations issued by the State Council shall apply.

For detailed discussions on procurement activities conducted by state enterprises in China, see P. Wang, “Regulating Procurement of State Enterprises in China – current status and future policy considerations”, policy paper delivered under the Asia Link Project (2007-2010) funded by the European Commission.

12.2 Barriers to EU public procurement as seen by Chinese investors in Europe

Although the EU public procurement regime exemplifies the principles enshrined in the GPA, such as competition, transparency, removed institutional barriers to trade and harmonisation thanks to the governing public procurement Directives, persistent fragmentation is observed by some Chinese investors in Europe who complain about unpredictability, increased business costs and risks. Having said that, there is no doubt that the EU procurement market is one of the most open in the world. Indeed, some Chinese companies are big winners of procurement contracts in Europe. For example, in September 2016, the UK government agreed to allow China General Nuclear (CGN) and France's EDF to build Hindley Point C in Somerset. The construction cost of the nuclear plant is estimated at almost GBP 30 billion (€33.7 billion). The CGN will take a 33% stake in Hinkley, and in return CGN will lead another nuclear power plant project, the Bradwell power station, worth GBP 18 billion (€20 billion) in Essex.¹³⁹ Also, building on its past procurement success in providing e-powered full-sized buses in the Netherlands, in June 2015, China's BYD Company Ltd. obtained the procurement contract from the Amsterdam Schiphol Airport to supply a fleet of 35 pure electric buses, which will be used to transport passengers between aircrafts and terminals.¹⁴⁰

As mentioned earlier, some barriers are due to member states' competences in setting up procedures, awarding criteria and evaluation policies in their respective national procurement legislation. Procurement procedures imposed by member states are seen by Chinese investors as cumbersome and unpredictable, since different member states may impose different rules despite harmonisation at the Union level. In any case, national officials are criticised for being overly prudent in that, instead of focusing on obtaining 'value for money', in order to be 'safe', public procurement often deteriorates into 'ticking of items' on a long list of bureaucratic requirements.¹⁴¹

So far, the EU has concluded 22 free trade agreements with third countries and some of them are GPA parties, such as Korea and Singapore;¹⁴² while others are

¹³⁹ See China plans central role in UK nuclear industry after Hinkley Point approval, *Guardian*, 15 September 2016 (www.theguardian.com/business/2016/sep/15/hinkley-point-chinese-firm-to-submit-essex-nuclear-plant-plans).

¹⁴⁰ See www.bydeurope.com/news/news.php?action=readnews&page=1&nid=209.

¹⁴¹ Pelkmans & Correia de Brito, *Enforcement in the EU Single Market*, CEPS Paperback, CEPS, Brussels, 2012, p. 79 (www.ceps.eu).

¹⁴² Trade and investment negotiations between the EU and Singapore were for the most part completed on 17 October 2014. On 10 July 2015, the Commission lodged the application initiating proceedings with the Court of Justice of the EU for an Opinion on the EU competence to sign and ratify the agreement. The Court issued Opinion 2/15 on 16 May 2017. For its entry into force, the draft agreement needs to be formally approved by the European Commission and then agreed upon by the Council of Ministers, and ratified by the European Parliament. See Overview of FTA and Other Trade Negotiations, updated November 2017, EC DG Trade (http://trade.ec.europa.eu/doclib/docs/2006/december/tradoc_118238.pdf).

not, such as Mexico, Chile, Colombia, Peru, South Africa and the ACP countries.¹⁴³

The models of bilateral cooperation on public procurement undertaken between the EU and its FTA partners are different, even vis-à-vis Korea and Singapore, although all three parties are GPA members.¹⁴⁴ Between the EU and Korea, cooperation on public procurement and expanding on each party's public procurement market are based on the WTO GPA, except for build-operate-transfer contracts and public works concessions, which are subject to specific terms agreed in the FTA.¹⁴⁵ The chapter on public procurement in the EU-Singapore FTA is extensive, however, in the form of a stand-alone agreement on public procurement, with details on covered entities and activities from both sides, complete with thresholds as well as general notes and derogations on the EU's side concerning exceptions to the coverage.

12.3 Possible directions for EU-China negotiations on public procurement

The directions of EU-China negotiations on public procurement under an FTA could either follow the GPA or an augmented GPA+ approach. But as the EU advocates deep and comprehensive FTAs, it is almost certain that the EU will favour a GPA+ approach. In practice, to borrow its language used on IPR cooperation under FTAs, the EU will endeavour to "complement and specify" GPA rules when negotiating with China on public procurement.

Access to China's public procurement market has been a thorny issue in EU-China bilateral trade relations. Although both sides have complaints against each other, Chinese businesses generally agree that the public procurement market in the EU is open and transparent, while EU business is much more frustrated by the limited access to the market in China, the lack of reciprocal treatment and all the monopolies that SOEs enjoy. The EU as well as its member states have urged China to offer more covered entities at more administrative levels and in wider provincial territories with lower thresholds, in addition to a more transparent and non-discriminatory institutional framework. The question of SOEs' coverage is yet another controversial area. It is yet to be seen how the Commission's revised proposal of an "International Procurement

¹⁴³ Available at <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52017SC0364>
Available at http://trade.ec.europa.eu/doclib/docs/2012/november/tradoc_150129.pdf.

¹⁴⁴ As to EU's FTA partners which are not GPA parties, cooperation on public procurement in each FTA is different, ranging from technical cooperation and assistance to full adoption of the EU rules. For example, the public procurement provisions contained in the EU-Chile Association Agreement concerns cooperation and providing technical assistance on issues connected with public procurement, paying special attention to the municipal level (Art. 33, EU-Chile Free Trade Agreement). However, to the EU's eastern neighbours, such as Ukraine, Moldova and Georgia, each agreed to adopt EU's *acquis* on public procurement within a certain timeframe, together with institutional reform in order to establish an effective public procurement system (Chapter 8, EU-Ukraine Deep and Comprehensive Free Trade Area. Art. 268.2, EU-Moldova Association Agreement. Art. 141.2, EU-Georgia Association Agreement).

¹⁴⁵ Art. 9.2.2, the EU-South Korea Free Trade Agreement.

Instrument" may enforce the principles of reciprocity and non-discriminatory treatment vis-à-vis China.

Reflecting on China's six GPA offers submitted so far, China has made considerable concessions in terms of coverage as well as thresholds, as mentioned previously. As the EU already offers third countries open access to its public procurement market, and some Chinese businesses have won big contracts, it could be that the EU would aim for the same degree of openness from the Chinese side – based on the principle of reciprocity, together with a reviewing and monitoring mechanism for best implementation.

EU-China cooperation on public procurement also does not seem possible without both sides reaching an agreement on SOEs' coverage. With the SOEs reforms that China has undertaken in the last three decades with a view to placing their operations on commercial terms, without privileged access to government policies and funds, China needs to convince the EU. This would mean passing the test of public body, or of public funds, of exempting those SOEs (if private and commercial) from the remit of public procurement coverage, or possibly falling within the remit.

On the Chinese side, it is observed that negotiations of the country's GPA accession have so far served as a drive for China's institutional reform on its public procurement system. The benefits accrued from this exercise are that China's public procurement system is now safeguarded by legal instruments, with the aims of eliminating corruption while efficiently using public funds. China is now working to establish good governance in the area of public procurement, as is seen from the Implementing Rules of the Government Procurement Law. China's procurement procedures are normalised and have become more transparent. A mechanism of checks and balances has been installed, complete with a public-private partnership model of cooperation in procurement of services and works. Cooperation between the EU and China on public procurement could be one way to further China's institutional reform in this regard, e.g. concerning better regulations, especially with regard to transparency, and regulatory monitoring as to how best to maintain discipline at the local governmental levels while enjoying decentralisation at the same time. The EU faces the same challenges, too, since its decentralised procedures, requirements and substance cause undesirable regulatory heterogeneity among the member states resulting in barriers or distortions, prompting Chinese businesses' complaints against a fragmented public procurement market in the EU.

13. Intellectual property rights and geographical indications

13.1 Introduction

Intellectual property rights (IPRs) are important to the EU's economic growth. It is estimated that IPR-intensive sectors account for around 39% of EU GDP (worth some €4.7 trillion annually) and, taking indirect jobs into account, up to 35% of all jobs.¹⁴⁶ China, although having achieved remarkable progress in IPR protection over the last three decades, is still confronted with the challenges of weaker IPR protection and enforcement, which adversely affects the country's ambition of further opening-up and becoming an innovative economy.¹⁴⁷

China is on the EU's "list of priority countries" for IPR infringement. IPR infringement remains a serious problem for EU businesses in China. For example, 64% of all fake goods seized at European borders in 2012 came from China.¹⁴⁸ Issues hampering bilateral trade focus on transparency (judicial procedures), IPR online protection, admissibility of supplementary data for pharmaceutical product patent applications,¹⁴⁹ protection of theft of trade secrets and criminal enforcement against

¹⁴⁶ Intellectual property rights intensive industries: contribution to economic performance and employment in the European Union, Industry-Level Analysis Report, Joint project between the European Patent Office and the Office for Harmonisation in the Internal Market, Munich and Alicante, 2013.

¹⁴⁷ For example, at a meeting of the State Council in November 2017, Premier Li Keqiang conceded that inadequate protection of intellectual property had contributed to the decline in private investment. To protect these rights better, the State Council said the government would enhance IPR protection by for instance introducing punitive fines for infringements, as a means to rectify the situation of "cheap to infringe, expensive to enforce" IPRs. The State Council plans to increase costs for those caught infringing IPRs, and will make rights protection more affordable. Private businesses will enjoy equal rights similar to public sector companies. Note that another measure announced by the State Council to enhance protection of IPRs is to "clear, revise or abolish" regulations or documents that were contradictory to the 2007 Property Rights Law and the 2016 guidelines on improving property rights protection. See *China Must Enhance Intellectual Property Rights Protection: Premier Li*, Reuters, 23 November 2017 (see www.reuters.com/article/us-china-property-protection/china-must-enhance-protection-of-intellectual-property-rights-premier-li-idUSKBN1DN08C).

¹⁴⁸ Note, however, this figure was 9% less compared to 2011, during which, according to EU customs statistics, 73% of goods suspected of infringing IPR came from China. On the other hand, in 2012, four out of every five European businesses operating in China rated Beijing's enforcement of IPR laws and regulations as inadequate. Fact Sheet: Facts and figures on EU-China trade, March 2014.

¹⁴⁹ Post-data admissibility is a big problem facing by the EU and US pharmaceutical companies because they have a huge stake in China. In December 2013, China's State Intellectual Property Office clarified that the submission of post-filing experimental data is permissible in very limited instances, when, for example, being used to confirm that the technical solution has the use or effect asserted in the specification of a patent application (such as to prove the facts or statements in the original specification are correct). Nonetheless, submission of post-filing experimental data will not rectify a disclosure that is insufficient at the time of filing. Since then, the US pharmaceutical industry reports progress as a result of this policy change. However, implementation of the commitment has been inconsistent, resulting in patent invalidations. It should be noted that SIPO published its new Patent

online copyright infringement. It is noted that the Chinese authorities do engage European businesses for public consultations and to improve on its IPR legislation. However, the problem is delayed or inconsistent implementation, which engenders new concerns.¹⁵⁰

Chinese businesses in Europe have no complaints against the EU's IPR protection regime. Chinese enterprises, such as Huawei Technologies and ZTE Corporation, are top patent applicants under the EPO (European Patent Office) filing system.

13.2 EU-China IP Dialogue

Although China is constantly on the "priority watch list" of the US Special 301 Report, too, the EU appears to be less aggressive than the US in criticising China for its weak IPR protection and enforcement.¹⁵¹ Indeed, for example, in November 2017, as equal partners, the EPO and China's State Intellectual Property Office (SIPO) signed a new agreement and upgraded their cooperation, from barely a technical, to a strategic partnership, with the aim of strengthening cooperation between the two offices, providing better services for global intellectual property users and contributing to improvements in the world's IP system.¹⁵² Overall cooperation between the EU and

Examination Guidelines, which took effect in April 2017. It is now made clear that SIPO will accept experimental data submitted after the patent application filing date – provided that the technical effect to be demonstrated by such experimental data can be obtained by a person skilled in the art from the disclosure of the patent application.

¹⁵⁰ For details, see European Business in China Position Paper, 2017-2018-2016. The US businesses are confronted with the same problems of implementation. See US government 2016 and US Government 2015 Special 301 Report, pp. 29-36 and 42-43.

¹⁵¹ For example, as early as 1979, when China launched its economic reform, the Agreement on Trade Relations between the United States of America and the People's Republic of China was concluded, in which Art. VI dealt with IPR protection, concerning patent, trademarks, copyrights and unfair competition. At the time, as IPR legislation did not exist in China at all, both countries agreed to recognise the importance of IPR protection and pledged to provide IPR protection on a reciprocal basis based on laws and international practice. In the same year, the China-US Agreement on Cooperation in Science and Technology was also concluded, in which it was envisaged that "treatment of IPR" may be a covered subject while implementing the agreement. These two agreements may have prompted China to accelerate its process of IPR legislation, as the Sino-US Trade Negotiation and Memorandum of Understanding (1992) resulted in China's first patent law amendment taking place in 1992, which made significant changes to China's patent legislation, such as wider scope of patentable subject matters and longer period for patent protection. In 2007, the US brought China to the WTO Dispute Settlement Body for the violation of certain international IPR enforcement measures. See China – Measures affecting the Protection and Enforcement of Intellectual Property Rights (DS362).

¹⁵² Information-sharing on databases of granted and applied patents, Cooperative Patent Classification (CPC), examination capacity-building, examination quality, re-examination, etc. are areas of bilateral cooperation. See "19th Conference of the Heads of Offices between the State Intellectual Property Office of the People's Republic of China and the European Patent Office", Press Release, 23 November 2017, Zhengzhou, China (in Chinese) (www.sipo.gov.cn/zscqgz/2017/201711/t20171124_1320380.html). See also "EPO and SIPO Sign New Partnership Agreement,

China encompasses technical assistance¹⁵³ and advocacy for enhanced IP protection at multilateral fora. For the latter, implementing a simplified and improved patent granting procedure by adopting the Global Dossier service is an example.¹⁵⁴ Better protection of geographical indications above the minimum standards set down by the TRIPS Agreement is another example, which will be elaborated later in this chapter.

Such partnership has come into formation after the annual EU-China IP Dialogue was established in 2004. Held alternatively in Brussels and Beijing, under the framework of the Dialogue, Chinese and EU IPR policy-makers, practitioners and academics exchange ideas on best practices, update each other on the development of legislation, or “solve concrete problems faced by EU companies”. Since 2005, in order to bring more focused technical discussions to the Dialogue, the EU-China IP working group was also established and joined by industry and other rights holders.

On the other hand, the EU and China (as well as the US) are close partners in global IPR protection. For example, both parties are members of the IP5 project, an initiative involving the world’s five biggest IP offices in order to improve the efficiency of the examination process as far as multi-patent applications are concerned. Such cooperation has grown in importance in recent years, simply because China has evolved to become a world’s leading patent applicant.¹⁵⁵

13.3 China’s IPR legislation and enforcement

The landscape of IPR protection in the EU is straightforward. Although governed by different national laws, Parliament and the Council establish measures to create

IPR Protection Weekly”, 28 November 2017 (news.flanders-china.be/epo-sipo-sign-new-strategic-partnership-agreement).

¹⁵³ For example, IP Key is a long-running technical assistance programme implemented by the European Union Intellectual Property Office (EUIPO) in partnership with the EPO (see <http://www.ipkey.org/en/>). It is revealed that more than 2,000 Chinese patent examiners and other related professionals have been trained at the EPO, and the EPO has helped SIPO use tools in patent searches and examinations. In fact, the EPO and some of its national members have provided technical assistance to China’s IPR development ever since the early 1980s. Also, for example, thanks to the Project of Promotion of the Patent System of the People’s Republic of China, an inter-governmental agreement signed between China and Germany in 1983, Germany assisted China in the training of examination personnel and in the construction of a patent documentation database (see Ganea, 2005, p. 4).

¹⁵⁴ In this context, Global Dossier is a public service that enables users to monitor via a single online source how a family of patent applications is progressing at the IP5 offices. EPO and SIPO have been the first two offices to implement the Global Dossier.

¹⁵⁵ For example, after the US and Japan, China was the world’s third-largest applicant under the Patent Cooperation Treaty (PCT) in 2015 and 2016. In 2016, China’s home-grown company ZTE Cooperation topped the PCT applicant chart with 4,123 published applications. China’s Huawei Technologies ranked second place on the chart. US-based Qualcomm Incorporated was the third-largest PCT applicant in 2016. See “Who Filed the Most PCT Patent Applications in 2016?” (www.wipo.int/export/sites/www/ipstats/en/docs/infographics_systems_2016.pdf).

European IPR in order to provide uniform IPR protection throughout the Union, and for the setting up of centralised, Union-wide authorisation, coordination and supervision arrangements.¹⁵⁶ The EU therefore harmonises certain specific aspects of IPR through the creation of a single European system, which is the case for the EU trademark and design, and as will be the case for patents.

13.3.1 The turn-around of IPR in China

China has achieved remarkable progress in IPR protection for over four decades, after a series of IPR and related laws were first enacted after the Cultural Revolution, in the late 1970s.¹⁵⁷ Ever since the country acceded to international IPR treaties, such as the Paris Convention in 1983 and the TRIPS Agreement in 2001, protection measures provided by China's IPR legislation have been compatible with, and on certain subject matters above, the minimum standards set down by the international treaties China has signed. China's IPR laws are updated regularly to reflect changing domestic needs, comply with international obligations and implement government IP policies. Within the broader framework of China's WTO accession commitment, China has complied in a painstaking manner.¹⁵⁸

These achievements in IPR legislation should not be underestimated solely because China is ruled by Communist ideology under which all property, whether real or intellectual, is by default collectively owned. Spearheading technological modernisation may be rapidly achieved through importing foreign advanced technologies, but in this case IPR protection is a prerequisite. In order to manoeuvre between the two opposing concepts of collective and private property ownership, China declared it would follow a socialist commodity economic development model (which in more recent years has become a 'socialist market economic development model'). Thanks to this successful transformation of ideology, protection of private property rights became possible in China's legislation. Arts 94-97 of the General Principles of

¹⁵⁶ Art. 118, Treaty on the Functioning of the European Union.

¹⁵⁷ For example, Criminal Law was enacted in 1979, Trademark Law in 1982, Patent Law in 1984, Copyright Law in 1990.

¹⁵⁸ One example is that, in order to bring transparency to its judiciary, in October 2014, China's People's Procuratorate established the website of Case Information Disclosure of the People's Procuratorate of the P.R. China (www.ajxxgk.jcy.gov.cn/html/index.html). It covers case information of 3231 provinces and municipalities, as well as military corps in the Xinjiang autonomous area. Information with regard to procedural stages of cases, case defence documents, major cases, submitted case documents, appeals as well as final case decisions, etc., is posted on the website. This may be considered as a great leap forward in the history of China's legal history. Burdened with thousands years of feudalism when the society was divided into those who ruled and those who were ruled and strictly confined, case information was a privilege and disclosing case information to citizens was considered unnecessary, if not unthinkable. Therefore, disclosing case information is more than just instilling transparency in China's judicial system but also about relinquishing privilege. This perhaps can explain why – although having been a member of an international trading community for more than a decade – it took China another decade to establish a case-reporting system.

Civil Law (1986) provide that copyrights, trademarks, discoveries, inventions and other achievements in scientific and technological research are protected.¹⁵⁹

The background concerning property ownership is critical to understanding the (lack of) appreciation of IPR and its weaker enforcement in China, especially when the IPR regime was just re-installed. Although the Chinese legislature consistently attempts to reinforce the country's IPR enforcement system, for example, with each amendment and through various IPR enforcement campaigns, including specific IPR protection courses in selected primary and middle schools nationwide, weak enforcement continues, which may negate China's achievements in IPR protection.¹⁶⁰

IPR enforcement in China is undertaken by an administrative-judicial dual-track system. The origins of China's persistent weaker IPR enforcement are reflected in both limbs of the enforcement mechanism, namely weaker administrative enforcement and less efficient case-handling capacity under judicial enforcement. The root cause goes back to collective property ownership, with the result that Chinese society's awareness of IPR infringement, i.e. a violation of a private right, is still wanting and grievances against infringement are left without adequate redress.

Administrative and judicial enforcement are of equal importance. Having administrative enforcement in place is a historical (due to the legacy of the Cultural Revolution) as well as cultural choice since Chinese society values harmony, while litigation will only be the very last resort. Therefore, although administrative enforcement bears weaknesses, such as the lack of legal certainties, it nonetheless shares equal responsibility with judicial enforcement. Having said that, in recent years, judicial enforcement has gradually been gaining ground vis-à-vis administrative enforcement, and the number of IPR litigation cases are on the rise on a yearly basis. In 2016, Chinese courts heard 136,500 IPR cases, which records a 24.8% increase. This trend, already going on for a number of years, could be a consequence of China's increased

¹⁵⁹ Note that constitutional protection of IPR was only provided in 2004 – 22 years after the Trademark Law, China's first IP law, was enacted in 1982. And China promulgated its first (general) Property Law only in November 2013, which was no less than 30 years after the IPR regime came into effect in the country.

¹⁶⁰ The 2016 Special 301 Report delivered by the US Trade Representative describes the landscape of IPR protection and enforcement in China as complex and contradictory. On the one hand, there are repeated affirmation of the importance of IP by China's leadership, ongoing IP legal and regulatory reform efforts, and developments in individual cases in courts. On the other hand, progress towards effective IPR protection and enforcement is undermined by unchecked theft of trade secrets, market access obstacles to ICT products raised in the name of security, measures favouring domestically-owned IP in the name of promoting innovation in China, rampant piracy and counterfeiting in China's massive online and physical markets, extensive use of unlicensed software and the supply of counterfeit goods to foreign markets. See the 2016 Special 301 Report, Office of the United States Trade Representative, April 2016, at p. 29.

adjudication capacity, among other reasons such as an easier case transfer route from administrative to judicial enforcement.¹⁶¹

Due to its intrinsic disadvantage, administrative enforcement is often blamed for being too weak to deter future infringers. For example, it is only equipped to award limited remedies, while a mediation agreement is often left unenforced. This renders administrative enforcement uncertain at the expense of IP right holders.

13.3.2 Administrative enforcement: culturally rooted but less effective

Apart from being a cultural tradition, administrative enforcement was promoted as a substitute for judicial enforcement because China's judicial system was not at all functioning for adjudication when it was reinstated after the Cultural Revolution.¹⁶² The administrative enforcement mechanism continues its function these days with increased judicial powers as the Chinese legislature attempts to bring legal certainty as well as authority to the enforcement effort.¹⁶³ But one should not overlook that personnel dedicated to administrative enforcement remain legally competent. This being the case, no matter how powerful IPR enforcement measures may improve, the effectiveness of implementation may very well be compromised via the administrative route.

Although the administrative enforcement mechanism has meanwhile been empowered with more judicial capacity, one remaining flaw of the mechanism is that a mediation agreement does not include compensation for infringement. Administrative enforcement authorities are only entitled to issue administrative fines, confiscate illicit income and request the infringement act to be ceased. An enforcement measure without the power to impose infringement compensation delivers justice only by half. Infringers are unlikely to be deterred. This feature of "fine without compensation" persists, for example, in the Draft Patent Law 2015, although the new amendment is more precise with the amount of fines that the Patent Administration Authority may impose if passing off takes place, compared to the measures contained in previous versions of the

¹⁶¹ In 2016, 131,813 out of the 136,500 IPR cases heard by Chinese courts were concluded, which increased the rate for case conclusion by 30.09%. See Intellectual Property Rights Protection in China 2016, p. 7 (Chinese), SIPO.

¹⁶² During the Cultural Revolution, from 1966 to 1976, higher education was completely abolished in China, and so was the legal profession. Therefore, especially in the first 20 years after the Cultural Revolution, most of the limited number of legal professionals were in fact retired army officers who took up judicial posts or became lawyers after some initial legal training which was undoubtedly inadequate. As China's judicial system was less competent, the administration enforcement mechanism was developed to bridge the gap but such a quick fix was not incapable of solving all problems.

¹⁶³ For example, by virtue of Art. 61 of the Draft Patent Law 2015, the Patent Administration Department shall have the authority to mediate in the amount of compensation for the damage caused to the patent right holder. Later, if any party refuses to execute the mediation agreement, the other party may institute legal proceedings for compulsory execution.

patent law.¹⁶⁴ Nonetheless, a recent development is that China's State Council pledged to introduce punitive fines against IPR infringement, but it is yet to be seen how administrative enforcement may become more effective to deter future infringers.¹⁶⁵

At the moment, the country's administrative enforcement mechanism is simply not powerful enough to deter future infringers. It is unjust that there are many aggrieved patent right holders who do not receive compensation.

13.3.3 *The problems of judicial enforcement*

Criticisms of the judicial enforcement mechanism focus on inadequate compensation and less than desirable efficiency in case-handling.¹⁶⁶

Nonetheless, to take one example, the 2015 Draft Patent Law proposed (in its second draft published in December 2015) a drastic increase of compensation level as far as patent infringement is concerned: from RMB 100,000 to RMB 5,000,000 (€14,000-€700,000) (Art. 68, Draft Patent Law, 2015). This is a tenfold increase in compensation for patent infringement compared to the 2008 Patent Law.¹⁶⁷ Additionally, Art. 68 states that, in case of a wilful act of patent infringement, the damages may be increased by between one and three times the amount, in addition to the usual damages calculated based on "the circumstance, scale of the infringement and the result of damage caused by the infringement". This being the case, one must wait for clarifications of implementing rules or judicial interpretation to ascertain how the provision will be implemented in practice.¹⁶⁸

As to case-handling capacity, oft-heard complaints are that decisions laid down by some IP chambers appear inconsistent and other IP chambers lack expertise, especially when technologically challenging matters are involved.¹⁶⁹ However, the situation is improving. Since November 2014, IP-specialised courts have been established in Beijing, Shanghai and Guangzhou as part of a three-year experiment to

¹⁶⁴ In relation to patent passing off, in addition to civil liability, if the illegal turnover exceeds RMB 50,000, a fine of one to five times the illegal turnover may be imposed. If there is no illegal turnover or the illegal turnover does not exceed RMB 50,000, a fine of not more than RMB 250,000 may be imposed. Art. 66, Draft Patent Law 2015.

¹⁶⁵ See "China Must Enhance Intellectual Property Rights Protection: Premier Li", Reuters, 23 November 2017 (www.reuters.com/article/us-china-property-protection/china-must-enhance-protection-of-intellectual-property-rights-premier-li-idUSKBN1DN08C).

¹⁶⁶ See "China - Measures affecting the Protection and Enforcement of Intellectual Property Rights (DS362)". The US complained that the thresholds for criminal procedures are high and certain infringement acts are excluded from criminal liability.

¹⁶⁷ Under Art. 65 of the Patent Law 2008, the amount of compensation is in the range of RMB 10,000 to RMB 1,000,000 (€1,400-€140,000), which is a twofold increase in compensation for infringement compared to the 2000 Patent Law. The 1984 and 1992 Patent Laws did not provide any compensation at all.

¹⁶⁸ It is noted that there are no changes concerning criminal liabilities for patent infringement in the 2015 Draft Patent Law.

¹⁶⁹ China established IP-specialised chambers as early as 1993. Currently, there are about 560 IP chambers and 3,000 IP judges at four levels of court: basic, intermediate, higher and supreme.

adjudicate technologically complex cases of first and second instance and comprising both civil and administrative matters. Under the specialised IP courts, which have the status of an intermediate court, technology experts will serve as assistants to judges.

China's overall complex and opaque legislative framework and interwoven and overlapping institutional structure also adversely contribute to weak enforcement. Tracking laws, regulations and administrative rules promulgated at central and local governmental levels is a difficult task, which brings the complaint of "non-transparency" to the already complex IPR legislation framework.

Additionally, as local administration is empowered to legislate, and since local judges are appointed (and removed) by local governments, it's highly possible that local interest prevails in adjudication when the issue of cross-jurisdiction occurs. By the same token, decisions laid down by the central government may not be implemented faithfully at various local levels. The old Chinese saying of "the sky is high while the emperor is far away" is an illustration of this situation and appears to still hold true.

It is acknowledged, nevertheless, that the government has taken measures and started to rectify these institutional flaws that impede effective IPR enforcement. It was reported that, in 2016, SIPO combed through approximately 40,000 pieces of legislative documents including departmental rules and regulatory documents (which were issued by SIPO itself alone), 214 of which were eventually declared invalid.¹⁷⁰

13.4 IPR protection and enforcement measures in China's FTAs

China has so far implemented 14 FTAs.¹⁷¹ Except for the first two FTAs with ASEAN and Pakistan, and the China-Georgia FTA of which the text is not published at the time of writing, an IPR chapter is in every agreement, although the degree and scope of IPR protection vary. The trend is that the more recent the FTA, the stronger the TRIPS+ protection approach covering the whole spectrum of IPR, including copyrights and related rights, trademarks, patents, genetic resources, traditional knowledge and folklore, plant variety, etc. In 2015, the respective IPR chapters in the China-Korea and China-Australia FTAs provided in great detail the country-specific degree and scope of IPR protection within the framework of a series of WIPO-administered international IP treaties as well as the TRIPS Agreement in the case of the China-Korea FTA,¹⁷² and all

¹⁷⁰ Annual Report of the State Intellectual Property Office, 2016, p. 29.

¹⁷¹ As of 27 November 2017 (see details at <http://fta.mofcom.gov.cn/english/index.shtml>).

¹⁷² For example, according to Art. 15.3, the international IPR treaties covered by the China-South Korea FTA include the TRIPS Agreement, the Paris Convention for the Protection of Industrial Property, the Berne Convention for the Protection of Literary and Artistic Works, the Patent Cooperation Treaty, the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, the Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks, the Protocol relating to the Madrid Agreement concerning the International Registration of Marks, the World Intellectual Property Organization (WIPO) Performances and Phonograms Treaty, the WIPO Copyright Treaty, the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms, the

international IPR treaties if both parties acceded in the case of China-Australia FTA. In terms of standards for protection and enforcement, measures provided in both FTAs are regarded by parties as the minimum standards, not just the minimum standards set by TRIPS (Art. 15.4 of the China-South Korea FTA; Art. 11.3 of the China-Australia FTA).

The China-Korea FTA was signed on 2 June 2015. Perhaps because Korean pop music and TV dramas draw huge fervent followers in China, which has made the sector vulnerable to infringement, the China-Korea FTA particularly emphasises protection of copyrights and related rights, as well as border measures with regard to IPR enforcement. For IPR enforcement in general, the China-Korea FTA firstly stresses a fully-fledged commitment to information-sharing between the two parties, at the government, right holder and public levels (Art. 15.22 General Obligation, China-South Korea FTA). The clauses on damages emphasise compensation, including court costs and attorney's fees, sufficient to deter future infringers. The judicial authorities are provided with much power in terms of seizure of infringing goods, collecting evidence, imposing sanctions and may even, for example, act "inaudita altera parte" (Arts 15.24-25 Provisional Measures, China-South Korea FTA). The China-Korea FTA has a comprehensive part on special requirements on border measures, which basically summarises the relevant provisions contained in (at least the Chinese) national legislation, but the FTA emphasises that, with regard to trademark-infringing goods, the simple removal of the infringing trademark will not be sufficient to permit the goods to be released to the market. The China-Korea FTA also establishes the Committee on IPR to review and monitor the implementation of the IPR protection and enforcement measures.

The China-Australia FTA, signed on 25 June 2015, emphasises patent protection and enforcement (envisaging work-sharing in patent examination, improvement on patent examination quality and efficiency, see Art. 11.23.3, China-Australia FTA) as well as plant breeders' rights "with a view to better harmonising the plant breeders' rights administrative systems of both Parties" (Art. 11.16(a), China-Australia FTA). For example, while the China-Korea FTA focuses on information-sharing enforcement decisions, judicial and administrative, etc., the China-Australia FTA insists on information-sharing on databases of granted and applied patents, plant variety protection, geographical indication and trademarks. Patent applicants will be able to make amendments, corrections and observations in connection with their applications in accordance with each party's laws, regulations and rules. The China-Australia FTA also establishes a Committee on IPR, which undertakes the similar functions as the Committee established under the China-Korea FTA, save for the function of resolving disputes arising out of the IPR chapter.

13.5 IPR protection and enforcement measures in EU FTAs

The IPR chapter in the EU's FTA – taking the IPR chapter in the EU-Korea FTA as an example – covers almost every aspect of IPR protection and enforcement, in great and country-specific detail. It complements and specifies the rights and obligations under the TRIPS Agreement, but the scope of the chapter goes far beyond TRIPS and includes other international IPR treaties that both parties are signatories of, such as the Trademark Law Treaty and the Patent Law Treaty.

The presumption is that the EU and China should be able to reach an IPR agreement in an FTA, because China's IPR chapters with Korea and Australia are ambitious and compatible with the EU's TRIPS+ protection level. Certain areas that China has committed to its FTA partners already fall within the remit of EU-China IPR cooperation (for example, China and Australia's commitments for patent protection under their FTAs are nearly identical to the areas of SIPO-EPO cooperation). The only problem on the Chinese side is implementation (delays, inconsistency), as is noted by the EU chamber position paper and the US Special 301 Report. This is why, in both the Korea and Australia FTAs, an IPR Committee reviews and monitors the implementation of the IPR chapter. Another problem could be transparency. For example, the China-Korea IPR chapter requests in great detail what should be published in terms of IPR enforcement decisions while the China-Australia IPR chapter requests data base-sharing concerning, for example, granted and applied patents. Moreover, EU businesses in China have called for transparency with respect to court procedures. Language could be one barrier for effective information-sharing, as China may well lack qualified English speakers to translate every legal decision or patent (but then Korea is also not an English-speaking country – perhaps Korea has a less complex judicial system/framework of laws than China?). That's probably why, in the China-Korea IPR chapter, sharing information in the “national language” is envisaged.

13.6 Geographical Indications

13.6.1 *General background to geographical indications legislation, China and the EU*

Geographical indication (GI), just like other forms of IPR, yields high value for local economic development but is also subject to misuse and counterfeiting. The EU, where the concept of GI protection originated, has taken the lead worldwide in identifying and protecting its GIs. China, as a latecomer to GI protection, has a range of local products that correspond to the concept of GIs but only a few already known or protected globally. At the end of 2012, 10 Chinese food names received protected status in the EU as GIs, as a result of the EU-China Geographical Indications “10 plus 10” Pilot Project (European Commission, 2012b). Since then, there has been no application for the protection of extra Chinese GIs. In June 2017, however, the EU and China each proposed a list of 100 GI products for protection under the jurisdiction of the other. Cheese, wines and spirits dominate the list of the 100 EU GIs; on China's side, the GIs submitted for protection in the EU are mainly fruits, tea, rice and other agricultural products (e.g.

bamboo shoots). As a practice adhered to by the EU, determining GIs for protection from both sides is a necessary step for certainty before a GIs protection agreement with a third country may be concluded. The EU and China started to negotiate the Agreement on the Cooperation on, and Protection of, Geographical Indications in March 2011. Coinciding with the release of the 200 GIs, both sides expressed their commitment to conclude the Agreement by the end of 2017.¹⁷³

The market for imported foods in China is large and growing. Over the years, the bilateral trade volume of foodstuffs has been on a steep rise, with China becoming the EU's second-top food export destination after the United States in 2016 and China, the EU's 4th food supplier. Compared to 2015, total food exports from the EU to China in 2016 were valued at €11,385 million with an increase of 10.3%. China's demands for EU food have been steadily growing in the last 10 years with, from 2006 to 2016, an annual rate of change of 23.7% (European Commission, 2017). Additionally, as deep concerns emerge among Chinese domestic consumers over food safety and the quality and origin of ingredients¹⁷⁴, the EU stands to benefit from excellent opportunities for huge commercial gains if only it can penetrate the market and in the meantime execute effective measures to protect its GI products simply because GIs bring added value to a food product.

At multilateral level, Arts 22 and 23 of the TRIPS Agreement provide GI protection with regard to the standard level of protection and a higher level of protection for wines and spirits.¹⁷⁵ In the latter case, subject to a number of exceptions (Art. 24), the products have to be protected even if misuse would not cause the public to be misled. As to the legal means of GI protection, TRIPS recognises that different branches of laws for protection are used by different countries, such as specific GI laws, trademark law or consumer protection law. All are valid, since under the TRIPS countries shall enjoy the flexibility of not putting in place a judicial IPR enforcement

¹⁷³ See Joint Communiqué of the Directorate General for Agriculture and Rural Development of the European Commission and of the Ministry of Commerce of the People's Republic of China on the negotiation of the Agreement on Cooperation on, and Protection of, Geographical Indications, 2 June 2017. Nonetheless, delay may still be possible since it was equally envisaged for the Agreement to be concluded "*in the course of 2013*" when the "10 plus 10" Pilot Project was completed at the end of November 2012. See Press release, "EU-China Geographical Indications - '10 plus 10' project is now complete", Brussels, 30 November 2012.

¹⁷⁴ Statistics reveal that infant food and pork meat are the EU's top two agri-food exports to China in 2016, with a yearly increase of 42.8% and 88.1%, respectively. This could be a consequence of the food scandals that took place in China in recent years involving products ranging from melamine milk to "lean meat powder" pork; even lives were claimed and consumers' confidence to food safety dropped drastically. See, for example, "China Hit by New Food Safety Scandal", Associated Press, 11 January 2015 (www.cbc.ca/news/world/china-hit-by-new-food-safety-scandal-1.2897425). The top Chinese agri-food exports to the EU in 2016 were vegetables and preparations vegetables, fruits or nuts.

¹⁷⁵ Prior to the TRIPS Agreement, the Paris Convention, the Madrid Agreement, and the Lisbon Agreement, had all dealt with issues related to GIs. The first two have provisions on indications of source (the Paris Convention also mentions appellations of origin), while the last one specifically aims at protecting appellations of origin. For detailed discussions on the three agreements, see Wang (2006), pp. 908-91111.

system other than what is already in place for judicial enforcement in general. However, under an FTA the opposite may be true.

China opted to protect GIs within the remit of trademark protection, after the country acceded to the Paris Convention for the Protection of Industrial Property in 1985. At that time, GI protection was enforced by means of administrative orders by the State Administration of Industry and Commerce (SAIC). “Danish Butter Cookies” and “Champagne” were the two well-known cases that arose, in which the SAIC instructed its local SAIC bureaus to order a stop to the illegal use of those two names.¹⁷⁶ The second amendment to Trademark Law in 2001 established definite rules and regulations for protecting GIs when a GI mark may be protected either as a certification or a collective mark. Therefore, GI marks are provided with the same level of legal and economic protection as any other logo, name or mark registered as a trademark. In addition to protection under the Trademark Law, GI protection may be undertaken in China by virtue of the Provisions for the Protection of Products of Geographical Indication (2005). Promulgated by the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), it provides protection to GI products and has since established the *sui generis* GI protection system in China. In parallel with the two GI protection schemes, and governed by the Measures for the Administration of Geographical Indications of Agricultural Products (2007), the Ministry of Agriculture lays down a system of registration of raw agricultural products such as plants, animals, micro-organisms and products thereof (meaning processed) obtained in agricultural activities.¹⁷⁷

As far as the GI *sui generis* protection scheme is concerned, the approaches undertaken by China and the EU are similar. After all, China's *sui generis* GI protection scheme has evolved from Europe's GI protection concept of “protected designation of origin” thanks to Sino-French cooperation dating back to 1994.¹⁷⁸ As for the relationship between the trademark and the *sui generis* GI protection schemes, following the Jinhua ham case (2003),¹⁷⁹ the position assumed by the Chinese judiciary is “co-existence”, in

¹⁷⁶ Available at <http://www.cipedu.com/News/Detail/378.html> (in Chinese).

¹⁷⁷ Art. 2(1), Measures for the Administration of Geographical Indications of Agricultural Products (2001).

¹⁷⁸ Sino-French cooperation on GI protection was initiated by the State Bureau of Quality and Technical Supervision and the French Ministry of Agriculture, Ministry of Economics and the *Bureau National Interprofessionnel du Cognac*. In this context, France pioneered in cooperation with China on GI protection, which eventually lead to closer EU-China cooperation. Up to now, a third of all the foreign GIs registered under the *sui generis* GI protection scheme has come from France. Overall, France has the most GIs protected in China, and bilateral cooperation between the two countries encompasses most areas of GI protection (see www.cgi.gov.cn/Home/Detail/923/ (in Chinese)).

¹⁷⁹ The Jinhua ham case is an oft-quoted when discussing China's GIs protection system, as it depicts the evolution of the system and, at the same time, articulate the position that the Chinese judiciary upheld in the relationship between trademark and *sui generis* GIs protection. Jinhua ham is a high-quality, dry-cured ham known in almost every household in China. With a long history of production, a traditional processing method dating back almost 1,200 years and a local breed of pig, the ham is named after the city of Jinhua where it is produced, in the Zhejiang Province.

terms of brand and product protection, as long as the prerequisites of “fair use” and “good faith” are fulfilled.¹⁸⁰ Note that Art. 59 of China’s Trademark Law (2013) has now made the relationship of “co-existence” explicit. As a result, the holder of a registered trademark cannot prohibit others from the proper use of the generic name, or information that directly indicates the quality, main raw materials, functions, purposes or the names of the geographical locations contained in the registered trademark.¹⁸¹

Protecting a GI as a product, instead of a trademark, is also known as the ‘old world’ approach, as opposed to the ‘new world’ approach advocated by countries like the US, when GIs in most cases are used as one of the distinctive elements of a trademark. On the premise of the ‘old world’ approach, following the European tradition, geographical indication is a particular product signifying all the elements attributed to the quality, reputation and characteristics of a particular product, including area of production, methods of production, etc., and also all the immaterial substance the denomination is endowed with: tradition, landscape, regional identity value, etc.¹⁸²

Foreign GIs may be registered for protection in China either under trademark protection¹⁸³ or the *sui generis* protection scheme. In the latter case, this has become possible thanks to the promulgation of the Measures on the Protection of Overseas Geographical Indication Products, which was issued by AQSIQ in March 2016. Prior to that, however, 10 EU GIs managed to register for protection by bilateral agreement under the *sui generis* protection scheme after the China-EU 10 plus 10 Pilot Project was

Nowadays, Jinhua ham is protected by both the trademark as well as the *sui generis* GI protection scheme. Under trademark protection, based on the information of registered trademarks posted on the SAIC website, only “Jinhua Ham from Jinhua City” is registered as a certification mark for GI protection. And the registrant is the Committee of Certification Mark Protection in Jinhua City. Other trademarks which are related to Jinhua ham, such as the “Jinhua Ham” mark applied by the Jinhua Ham Co. Ltd., which is located in Hangzhou City (about 200 km from Jinhua City), no longer appear to be valid. The AQSIQ GIs database shows that Jinhua ham produced in Jinhua City, consisting of 15 counties within the territory, is registered as a GI product.

For detailed description of the Jinhua ham case, see G. Wang and I. Toulouse, “Jinhua Ham, China”, pp. 67-70 (www.fao.org/docrep/013/i1592e/i1592e02.pdf).

¹⁸⁰ This position was later confirmed by the ECJ in its decision in *Bavaria NV, Bavaria Italia Srl v Bayerischer Brauerbund eV*, ECJ, 2 July 2009.

¹⁸¹ Paragraph One of Art. 59 of the Trademark Law (2013) stipulates: “The holder of the exclusive right to use a registered trademark shall have no right to prohibit others from properly using the generic name, graphics or models of a commodity contained in the registered trademark, or such information as directly indicates the quality, main raw materials, functions, purposes, weight, quantity or other features of the commodity, or the names of the geographical locations as contained therein.”

¹⁸² E. Thévenod-Mottet, “The Protection of Geographical Indications in Multilateral Systems: a Cultural Clash”, DOLPHINS Meeting, Florence, 10-12 September 2001, p. 8.

¹⁸³ If this is the case, by virtue of Art. 18 of the Trademark Law (2013), a local agent must be appointed in order to apply for trademark registration and to handle all trademark-related matters. Many foreign GIs have registered for collective mark protection in China.

completed at the end of 2012.¹⁸⁴ Nowadays, thanks to the measures, a foreign GI is eligible to apply for registration for protection in China in its own right – without association with trademark nor relying on any trade agreement. However, as a matter of principle, under the *sui generis* scheme, protection of foreign GIs is granted on the basis of reciprocity. This means that only those products originating from countries that have "established the corresponding communicative and cooperative relationship with China" may be qualified for protection. In any event, an applicant seeking to register a foreign GI in China must prove that the GI in question is protected in its country of origin.

Presently, China is not yet on par with the EU in terms of undertaking effective protection of GIs, nor is it as ambitious as the EU in exploiting GI protection for greater agricultural products and foodstuffs exports. In multilateral fora, however, China advocates a TRIPS+ GIs protection mechanism. On this account, it shares with the EU the same positions on: i) extending additional enhanced protection currently offered to wines and spirits to other GI products when, subject to a number of exceptions, they have to be protected even if misuse would not cause the public to be misled; and ii) creating a multilateral system of notification and registration that could cover all GI products, and not one limited to wines and spirits.¹⁸⁵

Within the EU, GIs are protected by a series of regulations on agriculture products and foodstuffs, spirit drinks and wine sector products, food laws, etc., issued by the Council and the Commission.¹⁸⁶ Two EU schemes, known as PDO (protected designation of origin) and PGI (protected geographical indication) promote and protect names of quality agricultural products and foodstuffs.¹⁸⁷ The EU legal framework provides for general rules on state control and supervision, while leaving some margin of discretion on the actual supervising system to be enacted by member states.

¹⁸⁴ The EU-China 10 plus 10 Pilot Project has been an unprecedented success simply because AQSIQ then was in fact neither equipped with the procedural power to examine and, nor, to register foreign GIs, based on the Provisions for the Protection of Products of Geographical Indication. The hurdle was surmounted as a result of the 10 plus 10 Pilot Project, therefore by a bilateral political arrangement. Note that Art. 26 of the provisions pledged that the AQSIQ shall formulate specific provisions in order to accept foreign GIs' application for protection in China.

¹⁸⁵ See Multilateral System of Notification and Registration of Geographical Indications for Wines and Spirits, Report by the Chairman, Ambassador Darlington Mwape (Zambia) to the WTO Trade Negotiations Committee, TN/IP/21, 21 April 2011.

¹⁸⁶ Such as Regulation (EU) No. 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs, and Regulation (EC) No. 110/2008 of the European Parliament and of the Council of 15 January 2008 on the definition, description, presentation, labelling and the protection of spirit drinks. For details, see www.wipo.int/wipolex/en/results.jsp?countries=EU&cat_id=5.

¹⁸⁷ Protected Designation of Origin (PDO) covers agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using recognised know-how. Protected Geographical Indication (PGI) covers agricultural products and foodstuffs closely linked to the geographical area. At least one of the stages of production, processing or preparation takes place in the area. Available at http://ec.europa.eu/agriculture/quality/schemes/index_en.htm.

Associations of producers promote GI products and prevent abuses, which have been identified in the approval process as much as in post-registration mechanisms.¹⁸⁸

Cooperation between the EU and China focuses on technical matters emphasising supervision, post-registration controls for and verification of compliance, as well as enforcement encompassing rights and obligations entailed in using GIs, certification, and ensuring an independent, transparent, predictable and efficient control system, etc.

13.6.2 *Enforcing GI protection in China*

In addition to issues arising from weaker IPR enforcement in general, what is unique in GI enforcement in China is that all three authorities for GIs protection are independent from each other, while their roles, functions, etc. could be similar. This may sometimes result in rivalry and conflict among SAIC, AQSIQ and MoA, and would weaken and even cause delays in enforcement actions, especially at the moment they are still confronted with the challenges resulting from transferring enforcement powers, for example.¹⁸⁹ On the other hand, the three GI protection schemes are neither in harmony (cross-referenced), nor do they support or link with each other.¹⁹⁰ This may not pose a problem if a GI registered simultaneously under different protection schemes is owned by the same producer or product association; otherwise, disputes will likely arise as shown in the Jinhua ham case. It is therefore understandable that some suggest fostering inter-departmental synergies in supervision or establishing a joint enforcement and information-sharing mechanism between the quality and technical supervision authorities and food and drug supervision administration. In early 2016, SAIC solicited opinions from various departments to discuss the establishment of a joint recognition mechanism for GIs.¹⁹¹

¹⁸⁸ Available at http://ec.europa.eu/agriculture/quality/schemes/index_en.htm.

¹⁸⁹ The Cognac enforcement case, which took place in Shantou City (Guangdong Province) in December 2014, testifies to this point. Before the enforcement action was able to be launched, the local Bureau of Quality and Technical Supervision and the Food and Drug Administration in the same city were obliged to clarify who was the lead enforcement actor of the case before an enforcement action was able to be launched. It was later confirmed that, for the case per se, enforcement power fell under the Bureau of Quality and Technical Supervision. See P. Zhong, *An Overview of the Actions Taken by Guangdong Provincial Quality Supervision Bureau to Investigate and Deal with the Infringement and Counterfeiting of Geographic Indication Products and Relevant Inspirations*, 12 December 2014.

¹⁹⁰ Furthermore, the three GI protection schemes use different special terms to describe and define GIs. The system design of the legislation in question also varies from one to another. See X.B. Wang and I. Kireeva, "The Protection of Geographical Indication in the EU and China: Tracing Causes of Delays in the Ongoing Negotiation on the Co-operative Agreement on Geographical Indications", *Intellectual Property Quarterly* 129 (2014).

¹⁹¹ This is meant to implement the State Commission Office of Public Sector Reform's Opinions on Improving the Geographical Indications Protection System and Mechanism (SCOPSR [2011] No. 26), which calls for setting up a special GI protection regime and encourages the drafting of GI protection laws, regulations and comprehensive policies. See Trade Policy Review China, Report by the Secretariat, at p. 108, WT/TPR/S/342, 15 June 2016.

Also, as far as administrative enforcement is concerned, identifying applicable national enforcement legislation sometimes appears to be a challenge, although legislation on food safety, IPR protection, quality control, consumer protection, etc., is ample. Under such circumstances, local legislation, for example provincial legislation, prevails. But such a solution tends to result in enforcement/protection discrepancies between provinces, leaving GI protection in China subject to a degree of uncertainty.

Initially, to Chinese legislators, protecting GIs meant better regulation and administration for food quality and standardisation. But more recently, the government wanted to engage GI protection as an instrument to promote community development and alleviate poverty.¹⁹² China is keen on promoting a modern and efficient GI implementation system, which brings about huge economic rewards.¹⁹³ Protecting first in the EU, then further increasing GIs exports in the global market is a strategy that some Chinese authorities have been contemplating (Shao, 2014),¹⁹⁴ but they are hesitant owing to the country's inexperience in managing a GI protection system and the system's lack of sophistication, as illustrated above.

13.6.3 GI protection in China's FTAs

Perhaps because it is yet to consolidate the fragmented domestic measures on GI protection, China seems timid or is perhaps unable to articulate bilateral GI protection

¹⁹² For example, the 13th Five-Year Plan (2016-2020) has emphasised the government's aim to use GIs protection as an instrument to develop pollution-free agricultural products, green foodstuffs, organic agricultural products, and agricultural products. This forms one of the agricultural modernisation projects to enhance agricultural product quality and safety. See Section 3, Innovations in Rural Financial Services, Chapter 21 Improve Systems for Providing Support and Protection for Agriculture, the 13th Five-Year Plan for Economic and Social Development of China.

¹⁹³ According to the Study of the Relationship between Trademark Protection and Economic Development conducted by SAIC, once a product is registered as a GI, its price level increases by 50.11% on average, 65.94% of farmers' income generates from GI production at place of origin. Among all the GI production, 53.38% of them have become regional economic pillar industries; GIs can generate more than 30% of economic impact to local employment, income and overall development. The study was quoted by Cui Shoudong, Deputy Director of Trademark Protection at SAIC, when presenting an overview of SAIC's work on GIs protection at the 2017 International Symposium on Geographical Indication, 29 June-1 July 2017, Yangzhou, China (www.saic.gov.cn/sbj/dlbz/xwbd/201707/t20170708_267423.html) (in Chinese).

Also, for example, in 2012, as one of the Chinese products registered for GI protection in the EU under the EU-China "10+10" pilot project, Zhenjiang Vinegar became the first-ever Chinese condiment that obtained GI protection in the EU. Since then, Zhenjiang Vinegar has witnessed rapid growth in terms of both industrial development and brand value. Its annual output has increased from less than 100,000 tonnes before GI protection to over 300,000 tonnes by the end of 2014. The number of specialised producers has risen from three to 26, with an annual total output value of nearly RMB 1 billion (€14 million). Today, Zhenjiang Vinegar, the top vinegar product exported by China, is sold to over 60 countries and regions around the world. See Shao (2014).

¹⁹⁴ See also the discussion on divergence between the trademark and AOC systems on GIs registration in Wang (2006), pp. 940-941.

under FTAs. Among the 14 FTAs that the country concluded so far,¹⁹⁵ bilateral GI protection is only a component in the FTAs with Peru, New Zealand, Australia and Switzerland, while the provisions appear to have been drafted in the style of ‘best practice’ and usually consist of one single article. For example, Art. 11.15 is the only article on GIs in the China-Australia FTA, which merely recognises that “GIs may be protected through a trade mark or sui generis system or other legal means” by both parties. Under the China-Peru FTA, both parties pledged to offer GI protection to products detailed on the two very short lists offered by both sides (22 products from China, three from Peru), although the FTA foresees the lists expanding.

13.6.4 GI protection in EU FTAs

Because “protection of EU GIs in third countries is a quid pro quo for abandoning the management of production and protection of the EU market”,¹⁹⁶ the EU is active in exporting its full-fledged GI protection system. The aim is to establish a harmonised regulatory environment to facilitate the protection of more EU GIs among its trade partners, following an FTA, for example, so that its Common Agricultural Policy could be further developed. This strategy may be illustrated by the EU-Vietnam FTA. The agreement¹⁹⁷ foresees a high level of protection in Vietnam for 169 EU GIs to be annexed to the future agreement, which is expected to come into force in early 2018 at a comparable level to the one under the EU GI legislation. On enforcement, protection of EU GI products will be assured on the Vietnamese market by appropriate administrative action, and such enforceability will have direct effect at the request of an interested party.¹⁹⁸ The listed GIs will benefit from immediate protection through the agreement and will be able to coexist with prior registered trademarks in Vietnam. The EU GIs can neither become generic nor can they unilaterally be invalidated by the other party. Finally, new GIs can in principle be added in the future. Exceptions to the full protection are restricted to a reduced number of EU GIs.¹⁹⁹

¹⁹⁵ For the list of FTAs that China has concluded with its trade partners, see <http://fta.mofcom.gov.cn/english/index.shtml>.

¹⁹⁶ B. O’Connor, “Geographical Indications in TTIP, the Transatlantic Trade and Investment Partnership”, *International Trade & Customs*, April 2015.

¹⁹⁷ Art. 6 Geographical Indications, Chapter 12 Intellectual Property, EU-Vietnam Free Trade Agreement.

¹⁹⁸ This provision has set the bar of enforcement much higher, which is a departure from the EU’s usual position of “no direct effect” as the majority of its FTAs explicitly rule out any direct effect (e.g. Art. 356 on Rights and obligations under this Agreement, of the EU-Central America Association Agreement); while all Council decisions on the signing of the present FTAs rule out any direct effects as well. For detailed discussions, see T. Engelhardt, “Geographical Indications under Recent EU Trade”, *International Review of Intellectual Property and Competition Law*, Vol. 46, 2015, pp. 787-789.

¹⁹⁹ Available at http://ec.europa.eu/agriculture/newsroom/243_en.htm.

13.6.5 GI registration and protection under an EU-China FTA

The agreement that the EU and China have been negotiating in the past few years aims to strengthen cooperation and supervision, and to combat counterfeiting,²⁰⁰ and to jointly promote GI protection for economic development and better trade.²⁰¹ For strengthened cooperation, it means continuously assisting China to streamline the GI product registration and protection mechanisms so as to facilitate more EU GI-protected goods to penetrate the Chinese market, and vice versa. The procedures for streamlining will most likely cover registration, compliance and supervision, opposition and revocation with the aim of achieving equal treatment, and on a reciprocal basis between Chinese and EU GIs. Enforcement is a crucial area for bilateral cooperation, too, not least because GI enforcement often requires a concerted effort between, for example, GI producers in the EU and various enforcement authorities in China.²⁰² On the other hand, China needs to eliminate the conflicts between the trademark and the product protection schemes as the case of “Jinhua ham” illustrates.

MOFCOM is optimistic that EU Regulation No. 1151/2012 on quality schemes for agricultural products and foodstuffs, which came into force in January 2013, provides more export opportunities for China's GI-protected products since, among others, mutual recognition of products from third countries is now undertaken through relevant bilateral agreements. Before 2002, products from third countries had to go through the process of single product application (Chinese Ministry of Commerce, 2015).

Given that concluding the Agreement on the Cooperation on, and Protection of, Geographical Indications is on the EU's EU-China 2020 Strategic Agenda for Cooperation, perhaps once the agreement is signed both sides will have a more solid and comparative basis on which to take the next step forward in their FTA negotiations.

²⁰⁰ According to the Situation Report on Counterfeiting and Piracy in the European Union (2017), which was jointly drafted by Europol and the EUIPO, in 2015 there was a growth in the counterfeiting of such labels and the practice is expected to continue. Most of the fraudulent products are premium high-value products like wine and spirits, as well as cheese, meat, fruit, vegetable products (including olive oil) and cereals.

²⁰¹ See EU-China 2020 Strategic Agenda for Cooperation, p. 7.

²⁰² As the two Cognac infringement cases testify, enforcement action succeeded when the *Bureau National Interprofessionnel du Cognac* (BNIC) cooperated closely with various GIs enforcement authorities in Shantou (in Southern China), including organising a workshop on IPR protection which was attended by the local offices of the AQSIQ, the SAIC, the Public Security Bureau, the Intellectual Property Office, the Food and Drug Administration as well as the Office for Anti-counterfeits. But in the same city, enforcement action succeeded only by half when criminal procedures against infringement were triggered by SAIC after a raid; but BNIC and the French Embassy received no reply from AQSIQ when a request for raid in order to stop the production and the sales of infringing products was submitted. See “An Overview of the Actions Taken by Guangdong Provincial Quality Supervision Bureau to Investigate and Deal with the Infringement and Counterfeiting of Geographic Indication Products and Reflections”, presentation given by ZHONG Peijing, Division of Laws and Regulations, Guangdong Provincial Quality and Technical Supervision Bureau, 12 December 2014.

14. State-owned enterprises (SOEs) and competition policy

Some of China's SOEs are the world's largest companies. Reflecting on the Fortune Global 500 (2017), State Grid ranks second, SINOPEC Group third and China National Petroleum Corporation fourth. Some 15 additional Chinese companies have made the top 100, such as SAIC Motor, China Mobile Communications, China Railway Construction, China Railway Engineering, China Life Insurance, Peng An Insurance as well as the four banks.²⁰³ All of them are SOEs, from the oil and gas, petroleum refining, construction, automobile, telecoms, utilities and banking sectors, where Chinese SOEs hold dominant positions in the strategic sectors domestically.

It is thus easy to understand that effective market access in the case of China is influenced heavily by the overwhelming presence of SOEs. As will be shown, this is not the case for Chinese companies coming to the EU or exporting to it. There can be no doubt that whatever FTA would be negotiated, the considerable distortions caused by SOEs (and their treatment by the government) and the at times unchallenged (super)dominance of SOEs in some markets would have to be dealt with satisfactorily.

14.1 The SOE problem in China and early reforms

China's SOEs have gone through sweeping reforms in the past three decades. Nowadays, the Chinese government often states that SOEs are no longer a special problem, i.e. they are divided into for-profit entities and public services entities. Thus many SOEs function as if they were private enterprises, disciplined by market rules and exposure to competitive pressures. Nonetheless, SOEs are seen as enjoying continued privileges in the form of preferential treatment in policies and funds. It has been reported that in 2014, 2,473 companies listed in the Shanghai and the Shenzhen Stock Exchanges received government support amounting to RMB 89.4 billion (€11.4 billion), up from RMB 75.8 billion (€9.6 billion) in 2012. Of these companies, 154 received more than RMB 100 million (€12.7 million) in 2014; 105 of which were SOEs. Moreover, amongst the top 10 companies that received support in 2014, for a total of RMB 17.3 billion (€2.2 billion), nine were SOEs (Table 14.1).²⁰⁴ As a result, SOEs remain a source of friction between China and its trading partners with regard to effective market access, overcapacity, public procurement and the (non-)application of competition policy. Such frictions are twofold. Domestically, European businesses in China are frustrated because they are discriminated against – there simply is not a level playing field vis-à-vis Chinese SOEs – while Chinese businesses in the EU enjoy national treatment, with access to judicial review if necessary. Thus, EU businesses in China express frustration and long for reciprocity. Internationally, Chinese SOEs are the frontrunners of the country's global investment, helped by guaranteed access to government coffers (frequently including provincial and local ones) that seem bottomless. Therefore, their FDI deals are not seen, in essence, as being struck between Chinese and foreign firms;

²⁰³ Industrial & Commercial Bank of China ranks 22nd on the list of Fortune Global 500 (2017), China Construction Bank 28, Agricultural Bank of China 38 and Bank of China 48.

²⁰⁴ WTO Trade Policy Review – China (2016), WT/TPR/S/342, at p. 97.

but between rather China, a state, and foreign private firms, resulting in unfair competition and market distortion. The success of Chinese SOEs in FDI may sooner or later backfire and begin to undermine the benefits from international trade and investment based on non-discrimination and respect for market principles (Büge, 2013).

Table 14.1 Top 10 companies listed in Shanghai / Shenzhen Stock Exchange that received public support in 2014

	Company	Government Grant RMB billion (€)	Industry	State-owned
1	PetroChina	3.93 (0.499)	Petroleum	Yes
2	China Petroleum & Chemical Corp.	3.17 (0.403)	Petroleum	Yes
3	SAIC Motor Corp. Ltd	2.67 (0.339)	Automobile	Yes
4	China COSCO Holdings Co Ltd	1.74 (0.221)	Shipping	Yes
5	Metallurgical Corp. of China Ltd	1.07 (0.136)	Engineering	Yes
6	Air China Ltd	1.06 (0.135)	Airline	Yes
7	TCL Corp.	1.01 (0.128)	Electronics	No
8	Chongqing Iron & Steel Co Ltd	0.92 (0.117)	Steel	Yes
9	Huaneng Power International Inc.	0.9 (0.114)	Power generation	Yes
10	BOE Technology Group Co Ltd	0.83 (0.105)	Semiconductor	Yes

Source: WTO Trade Policy Review – China (2016), WT/TPR/S/342, p. 98.

The EU has relatively few state-owned firms. Given the single market regime, SOEs have lost any actual or potential advantage for the state. There are strict rules about the transparency of the financial relationship a member state has with its state-owned enterprises; state aids are basically forbidden, except for some specific, justifiable reasons, under direct supervision of the European Commission as the watchdog – the reporting on those state aids is fully public. Other possible anti-competitive behaviour is dealt with by competition law against the abuse of the dominant position. The latter is also a component of China's Anti-monopoly Law, in force since August 2008. However, how Chinese SOEs may be disciplined by any antitrust authority is puzzling, since SOEs' "lawful business" shall be protected (Art. 7, Anti-monopoly Law). Until now, China has not published any implementing rules drawing clear demarcation lines between lawful and unlawful business. Whilst Chinese central and local governments hold the keys to policies and coffers that generate SOEs' success, if not guarantee their survival, these close relations have derailed the system. Collusion between 'mandarins' and businessmen kept many inefficiencies alive, undermining productivity, distorting the proper functioning of markets and engendering corruption. Many of those involved have been replaced following corruption charges in China's anti-corruption campaign against both officials and business persons waging in the past years.

China's overall economic reforms have long focused on SOE reforms. It started in the late 1970s after the Cultural Revolution. In the run-up to China's WTO accession, China stated its SOEs "basically operated in accordance with rules of market economy" and elaborated that "the government would no longer directly administer the human,

finance and material resources, and operational activities such as production, supply and marketing. The prices of commodities produced by state-owned enterprises were decided by the market and resources in operational areas were fundamentally allocated by the market. The state-owned banks had been commercialized and lending to state-owned enterprises took place exclusively under market conditions". The government pledged to further reform SOEs and establish a modern enterprise system (WTO, 2001). Of course, although at the time SOE reforms were far from being completed, it is undeniable that, by 2001, Chinese society had already been transformed profoundly due to the reforms preceding the country's WTO accession. Indeed, in order to become an eligible candidate leading towards WTO membership, the old planned economy on which the Chinese way of life was built since 1949 had to be dismantled. The SOEs were the principal protagonists of the planned economy. To this end, China's entire SOE structure has gone through reorganisation, corporatisation and privatisation, and they are expected to apply proper accounting rules and increase corporate productivity driven by market exposure.

SOE reform took place in stages. The first stage focused on "decentralisation and profit-sharing" when the SOEs and employees began to have autonomy in making operational decisions as well as in enjoying profits. Reforms in the second stage (1987-92) saw SOE ownership separated from management in order for further operational autonomy. The third stage consisted of restructuring, converting them into modern corporate entities, e.g. joint stock companies, while the government only sought to exercise its control on large monopolies and strategic resource sectors. After China's WTO accession, SOE reforms emphasised corporate and state governance concerning, for example, the misuse of state-owned assets. For this purpose, the State-owned Asset Supervision and Administration Commission (SASAC) was established in 2003,²⁰⁵ and the Law on State-owned Assets of Enterprises²⁰⁶ was promulgated in 2008. Following the Third Plenum in 2013, China announced a new wave of SOE reform measures, which aimed to dilute state holdings.²⁰⁷ Since then, although perhaps fewer deliverables are observed, this pledge persists and is heard again in October 2017 when President Xi

²⁰⁵ SASAC is responsible for managing government assets and reform of non-financial SOEs. SASAC's basic function includes drafting laws, regulations and departmental rules relating to the management of state-owned assets. In 2006, SASAC managed 40% of total SOE assets.

²⁰⁶ The law aims to, *inter alia*, consolidate and develop China's SOE assets and enable SOEs to play a dominant role in the national economy, especially in key sectors. Specific provisions of the law are designed to reduce administrative interference in state-invested enterprises (SIE) and require the government to perform its investor function according to law. Still, the State Council may decide on the "important" wholly state-owned enterprises and companies and state-holding companies whose merger, separation, dissolution, bankruptcy, and other important matters need to be approved by the government (Art. 34). Agencies performing investor functions are also entitled to appoint and remove an SIE's management or make suggestions on such appointments and removals (Art. 22).

²⁰⁷ Such measures include introducing private shareholders, extracting more profit from SOEs to finance public expenditures, specifying which industries legitimately require state control, and making clear that when the state remains a non-controlling shareholder in a competitive industry, normal market competition should apply. See Covington & Burling (2015), pp. 60-61.

delivered his report at the 19th National Congress of the Communist Party of China.²⁰⁸ On the other hand, amidst SOE reforms, employees went through some very painful, if not devastating, experiences. Permanent employment, the so-called 'iron rice bowl', which might last for generations in the family, disappeared. SOE employees were laid off *en masse*²⁰⁹ with only meagre compensation. The national health care system, which was linked to SOE employment, was reduced to minimum coverage, before health insurance schemes were introduced. The upshot was that the vast majority of laid-off SOE employees could no longer afford to get sick.²¹⁰

14.2 Reformed SOEs and barriers to market access

The question today is whether SOEs have become truly market oriented, with full exposure to competitive forces and without privileges, or guarantees or preferential subsidies in any form, as China declared in the run-up to its WTO accession. The present authors are not able to give a clear-cut answer, because the picture is mixed.

On the one hand, these days SOEs appear to be a reduced portion of the Chinese economy. The share of output produced by SOEs in the industrial sector has decreased from 28.2% in 1998 to 26.6% in 2010 and 22.3% in 2014. So has the number of manufacturing subsectors in which SOEs had the largest share of revenue.²¹¹ Due to continued restructuring, the number of Central Government-owned Enterprises (excluding financial institutions) under SASAC²¹² continued to decline, totalling 196 in

²⁰⁸ President Xi pledged to step up improved distribution, structural adjustment, and strategic reorganisation in the state-owned sector. And, SOEs will undergo further reforms to develop mixed-ownership economic entities, in order to become world-class, globally competitive firms. See Point 5. Accelerating efforts to improve the socialist market economy, Part V. Applying a New Vision of Development and Developing a Modernised Economy, Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era, report delivered by Xi Jinping at the 19th National Congress of the Communist Party of China, October 18, 2017.

²⁰⁹ During 1998-2003 alone, the SOE workforce was slashed by 35%: 40 million SOE employees lost their jobs. See Breakingviews (2013).

²¹⁰ The scale of lay-offs in China is beyond imagination for many. In mid-December 2015, as a measure to reduce overcapacity, it was reported that the Wuhan Iron & Steel (Group) Corporation would lay off 11,000 employees within three months. Some lay-offs would be in the form of early retirement and no-pay leaves. See "Wuhan Iron & Steel (Group) Corporation may lay off more than 10,000, officials denied", Xinhua Net, 15 December 2015 (www.gd.xinhuanet.com/newscenter/2015-12/15/c_1117461742.htm). Since then, Wuhan Iron & Steel (Group) Corporation merged with the Baosteel Group Corporation and the Baowu Steel Group Corporation was established on December 1, 2016, with a workforce of 228,000 (www.gd.xinhuanet.com/newscenter/2015-12/15/c_1117461742.htm).

²¹¹ WTO Trade Policy Review – China (2016), WT/TPR/S/342, at p. 96.

²¹² In China, State participation in SOEs varies from 100% ownership to the State acting as another shareholder. It was reported that at the end of 2011, there were 144,700 state-owned and "state holding" enterprises in China (excluding financial enterprises) with total assets of RMB 85.4 trillion (€10.9 trillion), an equity value of RMB 29.2 trillion (€3.7 trillion), and profits of RMB 2.6 trillion (€0.3 trillion). Their income, profit, and paid taxes accounted for around 40% of all industrial and commercial

2003, 159 in 2006, 129 in 2009, 112 in 2015, 106 in 2016 (January), and 98 in 2017 (December).²¹³ State-employees are fewer than those in France as a percentage of the labour force (Wall Street Journal, 2014). SOEs' contribution to China's gross industrial output is in steady decline. Based on the statistics released by the National Bureau of Statistics of China, the proportion of production by SOEs has fallen from nearly 50% in 1999 to 26% in 2011, while production by the private sector has risen from around 5% to 45% during the same period (Bergsten, 2014:304). At the same time, the Fortune Global 500 (2017) listing shows that all but one of China's top 40 firms are SOEs; the exception is Huawei Investment & Holding which rank 83rd. A 2013 study showed that China ranked first in SOEs' presence (96%) among 16 countries' top 10 firms, using an average of shares of SOEs in sales, assets and market value. While the size of these shares decreases when the coverage is extended to countries' 200 largest firms, the relative size remains unchanged. A trend is thus easy to detect and over the last couple of years SOEs' strengths have been further consolidated. By and large, Chinese SOEs retain a significant share of the market in strategic subsectors such as telecommunication and air transport services where they effectively control the market by holding an 80%-90% share (Table 14.2).²¹⁴ There is also a strong presence of SOEs in the financial sector, oil exploration, tobacco-related products, publishing, and the supply of electricity and heating, and all of which is reflected by the 10 largest SOEs in the list of the Fortune Global 500 (2017) as mentioned in the beginning of the chapter.

These three facts essentially reflect the status of China's SOEs of today. After decades of reorganisation, corporatisation and privatisation, the number of SOEs is considerably reduced, but their power is consolidated and strengthened.²¹⁵ Some SOEs have become the world's leaders in certain industrial sectors. Some loss-making SOEs were closed down or restructured as holding companies listed on stock exchanges in Shanghai, Shenzhen, Hong Kong, Singapore, London or New York. SOEs are of course champions of the sectors mentioned above, and their force in global expansion is unparalleled. SOEs are forerunners of China's outbound direct investment in recent years across the globe. But, as described above, China's SOE reforms have focused so far on structure and less on operations.

enterprises of the entire economy. According to the authorities, in May 2015, there were 1,012 "state-owned holding" enterprises listed on the Shanghai and Shenzhen Stock Exchanges with a total equity of 2.67 trillion shares. This accounted for 68.14% of the total equity of all the companies listed on these two stock exchanges. WTO Trade Policy Review – China (2016), WT/TPR/S/342, at p. 96.

²¹³ For a full list of these enterprises, see <http://www.sasac.gov.cn/n2588035/n2641579/n2641645/index.html>.

²¹⁴ OECD (2015), *State-Owned Enterprises in the Development Process*, OECD Publishing, Paris, 2015. Available at <http://dx.doi.org/10.1787/9789264229617-en> (last accessed 2 December 2017) at p. 150.

²¹⁵ For example, the state-owned State Grid, which ranks No. 2 on the Fortune Global 500 (2017) and is the world's largest electric utility company, holds a monopoly in China. The core of its business revolves around constructing and operating power grids. State Grid was founded in 2002, a by-product of China's three-stage power sector reform that started in 1986. The reform separated the former State Power Corporation of China into two grid companies, resulting in the emergence of State Grid. The company now owns and manages five regional power grid companies and 24 electric power companies (see <http://fortune.com/global500/state-grid/>).

Table 14.2 SOEs in China's economy, 2009-14

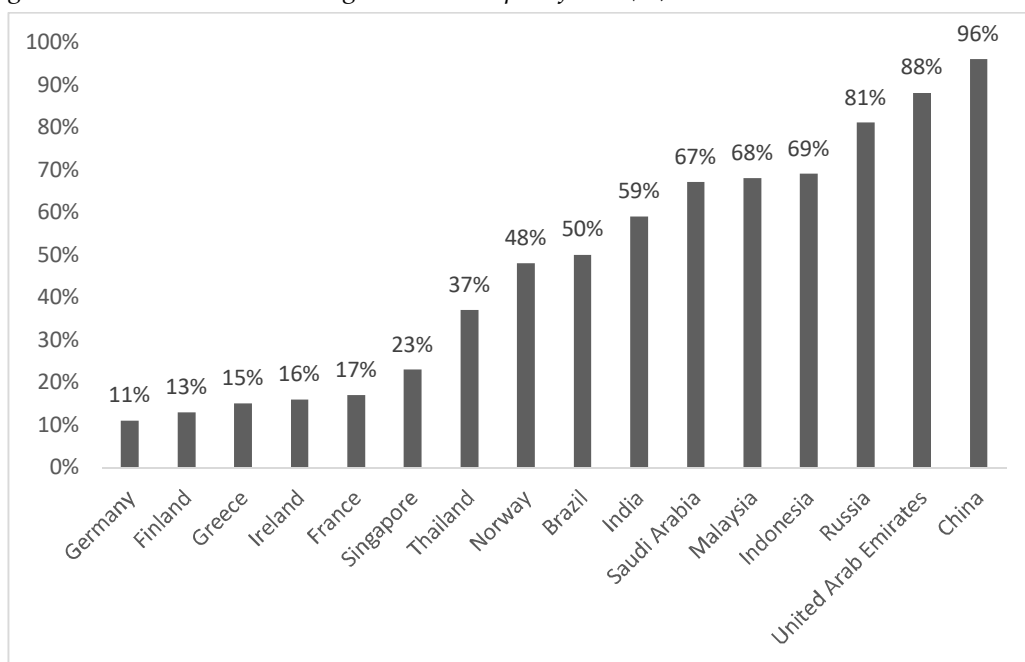
Sector	2009	2010	2011	2012	2013	2014
Industrial sector^a						
Number of total enterprises	434,364	452,872	325,609	343,769	369,813	377,888
Number of SOEs	20,510	20,253	17,052	17,851	18,574	18,808
% of SOEs	4.7	4.5	5.2	5.2	5.0	5.0
Total assets (billion RMB) (€ billion)	49,369 (6,307.53)	59,288 (7,574.84)	67,580 (8,634.28)	76,842 (9,818.11)	87,075 (11,125.58)	95,678 (12,224.52)
Total assets of SOEs (billion RMB) (€ bn)	21,574 (2,756.34)	24,776 (3,165.43)	28,167 (3,599.12)	31,209 (3,987.75)	34,399 (4,395.36)	37,131 (4,744.37)
% of SOEs	43.7	41.8	41.7	40.6	39.5	38.8
Total profits (bn RMB)	3,454	5,305	6,140	6,191	6,838	6,815
Total profits of SOEs^b (billion RMB) (€ billion)	929 (118.71)	1,474 (188.34)	1,646 (210.32)	1,518 (193.96)	1,592 (203.41)	1,451 (185.39)
% of SOEs	26.9	27.8	26.8	24.5	23.3	21.3
Construction						
Number of enterprises	70,817	71,863	72,280	75,280	78,919	81,141
Number of SOEs	5,009	4,810	4,642	4,602	3,847	3,753
% of SOEs	7.1	6.7	6.4	6.1	4.9	4.6
Gross output value (billion RMB) (€ billion)	7,681 (981.22)	9,603 (1,226.75)	11,646 (1,487.85)	13,722 (1,753.30)	15,931 (2,035.51)	17,671 (2,257.64)
Gross output value of SOEs (billion RMB) (€ billion)	1,519 (194.06)	1,815 (231.88)	2,044 (261.10)	2,293 (292.90)	2,616 (334.15)	2,207 (281.91)
% of SOEs	19.8	18.9	17.5	16.7	16.4	12.5

^a Including mining, manufacturing, and production and supply of electricity, gas and water.

^b Numbers referring to SOEs including state-holding enterprises.

Source: WTO Trade Policy Review – China (2016), WT/TPR/S/342, pp. 96-97.

Figure 14.1 SOEs' shares among countries' top 10 firms (%)



Note: Only countries with shares above 10% are shown.

Source: Authors' own elaboration based on Kowalski et al. (2013).

The threats that China's SOEs are exposed to are equally high. Overall, SOEs' leading positions in the national and international economies may not be a result of management strength but rather preferential government industrial policy, laws and regulations (including those issued by government agencies), as well as easy access to government funds. This policy drive results in discriminatory treatment of other players in the market, hampering competition and recklessly pursuing overcapacity, which remains a serious issue (although China is trying to tackle it).²¹⁶

A core question for EU observers (and, indeed, for EU competitors) is how is it possible to sustain massive overcapacities. In any market economy, such firms would long be bankrupt and exit the market or be broken up and the competitive parts divested as separate, viable firms or sold to national or foreign investors.

Policy favouritism translates into barriers to market access in the form of discriminatory treatment of foreign investors. A Covington & Burling study (2015)

²¹⁶SINOPEC, China's top SOE, for example, suffers from such inefficiency that in 2014 it was forced to sell a stake in its fuel marketing division to private investors. A number of top executives from the company's headquarters and subsidiaries have been removed on corruption charges. China National Petroleum Corporation, the country's second largest SOE, has been one of the prime targets of the anti-corruption campaign over the past two years. On the eve of the Chinese New Year in 2016, it was reported that the company's president, who took office in August 2014, was under corruption probe. His predecessor was sacked on corruption charges, too (see www.ccdi.gov.cn/yw/201602/t20160207_74169.html (Chinese)).

shows that the majority of SOE-supporting measures are applied at the pre-establishment stage with regard to market access restraints, the most notable exception being government financial support provided at sub-central level. Some discriminatory legal measures supporting SOEs are explicit; for example, in the telecom industry private business players are excluded from entering the market.²¹⁷ When it comes to differentiated treatment, at the post-establishment stage, it encompasses land allocation, financing, government procurement and direct government financial support. For all of these interventions, government exercises great discretion and commercial terms give way to political needs. For example, the state may allocate land as state investment to SOEs whose business links to industries important to China's economy and national security. Local governments follow suit, and all is done in the name of supporting enterprise development.²¹⁸

With regard to easy financing, note that in the mid-1990s, as a reform measure, Prime Minister Zhu Rongji disciplined banks and forced them to slow reckless lending. Non-performing debts were later cleared from lenders' books through the creation of special "asset management companies", which facilitated turning big banks into commercial businesses (Breakingviews, 2013). However, even when Zhu was still in charge, less commercial lending guidelines came into play; for example, the People's Bank of China, China's central bank, whose reform was overseen personally by Zhu, pronounced guidelines to support loss-making SOEs in the form of supporting their production of marketable and profitable products.²¹⁹ In parallel, Chinese banks provide SOEs direct financial aids sometimes in order to ensure a rapid implementation of government policy. This somewhat Jekyll and Hyde performance has continued ever since, but the practice has nevertheless backfired since many Chinese SOEs seem to rely heavily on debt rather than equity capital. HSBC calculates that China's SOEs' average debt-to-asset ratio is about 65%, above the 40-60% range considered acceptable by private investors (UK Foreign and Commonwealth Office, 2014). For example, China's

²¹⁷ For example, the Measures on the Administration of International Communication Access provide that the "establishment of an International Communications Gateway Exchange ('ICGE') shall be applied for by a wholly state-owned telecommunications business operator, who shall undertake the operation and maintenance of the ICGE. Without approval of the Ministry of Information Industry, no entity or individual shall establish an ICGE in any form." Art. 5, Measures for the Administration of International Communications Gateway Exchanges, Ministry of Industry and Information Technology (October 2002). For detailed discussions on pre-established SOE-supporting measures, see Covington & Burling LLP (2015), pp. 65-67.

²¹⁸ Art 2, Several Opinions of the Ministry of Land and Resources on Further Control over Land Assets and Promotion of the Reform and Development of State-owned Enterprises, Ministry of Land and Resources (25 November 1999) & Art. 19, Opinions on Further Deepening Shanghai SOE Reforms to Promote Enterprises Development, CPC Shanghai Municipal Committee and Shanghai Municipal People's Government 18 December 2013).

²¹⁹ Notice jointly Issued by People's Bank of China and State Economic & Trade Commission on Supporting Production of Marketable and Profitable Products of State-owned Industrial Enterprises in Loss (PBOC, MOFCOM, 11 September 1997) & Supplementary Notice by People's Bank of China on Further Supporting Production of Marketable and Profitable Products of State-owned Industrial Enterprises in Loss (PBOC, 9 June 1998).

10 largest lenders, all of which are large SOEs on the list of the Fortune Global 500 (2015), reported the highest proportion of bad debts since 2009 while overdue loans reached RMB 588 billion (€80.24 billion) at the end of 2013, a 21% increase from a year earlier (Bloomberg News, 2014).²²⁰

Figure 14.2 China's outstanding loan growth



Source: People's Bank of China (www.tradingeconomics.com).

It is thus not difficult to understand why overcapacity persisted in China in recent decades and has only worsened in recent years. On the other hand, although China should have ended such subsidies after joining the WTO due to China's obligations under the Agreement on Subsidies and Countervailing Measures, Covington & Burling (2015) maintain that, for example, SINOPEC and CNPC, reportedly obtained subsidies of around RMB 76 billion (€10.35 billion) in 2007 (Covington & Burling LLP, 2015:68-69). Local governments allocate special funds for SOEs, too. In early 2016, in the name of stimulating "people innovation for an innovative era", the Shanghai government announced that the municipality would compensate/subsidise Angel Investment Fund "losses". Angel Investment Fund is a policy tool to complement the stimulating measures implemented in 2006 concerning allocating dedicated "rescue funds" to top up investment in innovative start-ups. It was announced that the new policy was implemented in order to mitigate the "less effective" measures announced in 2006 due to its high thresholds.²²¹ Apparently, similar compensation/subsidy schemes were already announced in other provinces, such as Guangdong and Jiangsu (Caixin, 2016). The new policy attracted fierce criticism from economists and fund investors in Shanghai, although their focus is on, for example, easy fraud, far less on the government's financial subsidies/compensation responding to policy without due consideration of risk assessment. Based on prevailing policies, SOEs in certain sectors

²²⁰ There are also informal suggestions about debts to suppliers and other business which are simply not paid. The authors have not been able to verify this assertion.

²²¹ The alleged high thresholds included that the funds were only applicable to enterprises and industrial applications of high technological innovation, and the same amount of risk reserve funds must be fully paid up by investment firms.

may also qualify for tax incentives;²²² in recent years business linked to innovation guarantees a higher chance of success.

Policy and financial support of SOEs comes in many forms. It is evident that some SOEs' success, or sometimes their survival, hinges on support from the government. Government officials therefore were highly sought after by businessmen in order to solicit favourable treatment. With the dependent links between the two, it is clear as to why so many government officials, who held the keys to policy changes and funds, have been sacked on corruption charges in recent years. The evils of mandarin-businessman collusion had to be stopped. According to a report by China's Central Discipline and Inspection Commission in January 2016, between 2014 and 2015, 64 senior officials, more than half of them chiefs, from 55 SOEs under the central government's direct control, and mostly in the sectors of energy, telecom, transport and logistics, were caught for serious corruption, expelled and await further party discipline and judicial prosecution.²²³

To summarise the *modus operandi* of China's SOEs today, after decades of reforms: it is discriminatory policy and easy access to bank loans with preferential rates and terms leading towards a distorted market, with an uneven playing field and diminished effects of principles in international trade agreements, such as national treatment, most-favoured-nation treatment and transparency.

Therefore, for an EU-China FTA chapter on SOEs to be successful, the EU should create rules which confine SOEs to market-oriented behaviour by eradicating government interventions. Only in this way can all market players count on a level playing field. Before negotiating with the EU on SOEs, China could prepare by actually implementing the SOE reform measures announced at the Third Plenum in November 2013; these include factor-price reforms, reducing the subsidies that SOEs have enjoyed and developing a 'mixed-ownership economy'.²²⁴ Nonetheless, it remains to be seen how China can implement all these measures effectively, within the period up to 2020 set by the Third Plenum.

14.3 Can the EU and China reach an agreement on SOEs?

The EU signed a standalone chapter on SOEs in its FTA with Vietnam. China has not signed any standalone chapter on SOEs with its FTA partners. Usually, SOEs are not

²²² See, for example, Art. 2(4) of the Notice of Issuing Several Rules on Further Strengthening Technical Renovation and Investing and Promoting Technical Improvement by Enterprises, People's Government of Guangdong Province, 10 June 1999.

²²³ Sixty-four central government chiefs who controlled SOEs were sacked, nearly 40% were from the energy sector, Central Discipline and Inspection Commission, 4 January 2016 (Chinese). Available at http://china.eastday.com/c/20160104/u1a9167083_K26843.html.

²²⁴ Reforms on SOE ownership in the 1990s aimed to solve the deficit issue and many central SOEs began to list a minority of their shares on stock exchanges to attract private capital. The "mixed ownership economy" measures announced by the Third Plenum should change the governance structure of SOEs, encouraging private investors to take a controlling interest, and allowing employees to hold shares. See UK Foreign and Commonwealth Office (2014).

the subject of a standalone chapter, while the relevant provisions are often blended into chapters of, most noticeably, trade in services and technical barriers to trade. The EU's stance on SOEs in its FTAs is determined by non-discriminatory treatment and commercial considerations, by virtue of Art. XVII GATT (1947). Moreover, an ambitious FTA for the EU would include agreed terms on SOEs that must take precedence over domestic laws in case of conflict, as is the case of the EU-Singapore FTA with regard to specific commitments on financial services.

One may wish to draw an analogy between China and Vietnam since Vietnam also has a history of a planned economy with a significant presence of SOEs. For the issue of SOEs, Chapters 8 and 10 of the EU-Vietnam FTA must be read together. With regard to trade in services, investment and e-commerce in Chapter 8, the provisions emphasise better regulation and reiterate well-established principles, such as national treatment and most-favoured-nation treatment (though there are qualifications²²⁵); the FTA will not override measures previously adopted and maintained by Vietnam even though they may be inconsistent with the FTA (Art. 3(3), Chapter 8, EU-Vietnam Free Trade Agreement: Agreed text as of January 2016). There are also exceptions favouring typically SOE-dominant sectors, such as telecoms services, mining (including oil and gas), and in which case most-favoured-nation treatment shall not apply (Art. 4(3), Chapter 8, EU-Vietnam Free Trade Agreement: Agreed text as of January 2016). Therefore, since the EU-Vietnam FTA is not ambitious enough to "specify and complement" the existing international trading rules, i.e. not taking a WTO+ approach, it is not advisable to look at the EU-Vietnam FTA as an inspiration for China on SOE negotiations with the EU.

Reflecting on the original text of the Trans-Pacific Partnership (TPP) agreement, before the US pulled out of the Agreement in January 2017, SOEs' activities are governed by the principles of commercial considerations and non-discriminatory treatment, within the meaning of Art. XVII GATT (1947). What is new in the TPP on SOEs is that these two principles are upheld even when exceptions are applied. For commercial considerations, TPP countries agreed to not cause adverse effects, including injury to another party's domestic industry and to other TPP countries when applying non-commercial considerations within the remit of the agreement. Non-discriminatory treatment extends to judicial enforcement over commercial activities of foreign SOEs so that a foreign SOE operating in a TPP country will not be able to claim immunity on grounds of sovereign immunity. It sets a good example of restraining SOEs' non-market behaviour even when "exceptions" are applied. For example, with regard to supplying financial services under a government mandate by an SOE in order to support exports and imports (in which case non-discriminatory treatment and commercial considerations may not apply), these services must displace commercial financing, and the terms offered must not be more favourable than market terms (Art. 17.4.1, the original Trans-Pacific Partnership text). However, though the TPP sets a good example

²²⁵ For example, with regard to sectors as well as to investors, only "in like situations", national treatment and most-favoured-nation treatment will apply. Arts 3(1)(2) and Arts 4(1)(2), Chapter 8, EU-Vietnam Free Trade Agreement: Agreed text as of January 2016.

of rejecting exceptions to SOE-governing principles, it is a regional trade agreement which does not “specify and complement” rules.²²⁶ Therefore, copying the original TPP as a template for bilateral EU-China SOE negotiations may not be appropriate.

China is rather cautious concerning SOEs in its concluded FTAs and less consistent in detail. After all, the country has not offered SOEs as covered entities under its GPA offers. But some inclination toward opening up typically SOE-dominant sectors can already be detected. For example, under the China-Korea FTA, the financial services and telecom sectors, two SOE-dominant sectors, are open to competition. Especially under the telecom chapter, access to and use of public telecoms networks or services, competitive safeguards, independent regulatory bodies, universal service, freedom to choose the technologies for service and enforcement, etc., are guaranteed. In China's sixth GPA offer, activities in the fields of drinking water, electricity, energy, transportation, telecoms or postal services are now offered for procurement activity coverage, too, as is mentioned in the previous chapter. Also, amidst the ongoing SOE restructuring exercise, China started to employ the “public-private partnership” (PPP) model in certain sectors in order to diminish SOEs' dominant position. For example, in the utility sector, for water supply, Vivendi and Thames Water are the biggest investors while water pricing remains under the state control.²²⁷ The website of China's Central Government Procurement under the Ministry of Finance has a dedicated subsite on PPP in order to post tender notices published by all provinces, and to share best practices, relevant laws and regulations, research outcomes and domestic and international case studies.²²⁸

Interestingly, the China-Australia FTA looks like the EU-Vietnam FTA on SOEs as both reiterate established principles of national treatment and most-favoured-nation treatment and they tolerate ample non-conformity rules. Under the China-Australia Agreement, after the positive listing approach setting out governing principles on the schedule of specific commitments, national treatment, market access and most-favoured-nation treatment, the chapter on trade in services starts with a negative listing approach and affirms that the above-mentioned principles shall not apply to non-

²²⁶ This may also be the reason why the SOE provisions from the original TPP Agreement are not among the 20 suspended provisions agreed among the remaining 11 countries participating in the TPP, which has subsequently been renamed the Comprehensive and Progressive Agreement for the TransPacific Partnership (CPTPP). But SOEs will be one of the four “specific items” for “further discussions” before the new agreement is signed. The 20 suspended provisions include those dealing with the duration of data protection for new biotech medicines and with the extension of terms for copyright protection, the scope of ISDS provisions. The “four specific” items prior to signing are: state-owned enterprises; non-conforming measures on services and investment; dispute settlement; and cultural exemption. The revised agreement is expected to be signed by spring 2018 and to come into effect by 2019. See “Edging closer to a TPP-11 agreement”, European Parliament, November 2017.

²²⁷ Based on interview conducted in Beijing, 29 November-4 December 2015.

²²⁸ Little known is that PPP is identified as a key reform area by the State Council. It is regarded as a vital tool to transform government functions, stimulate the market and generate new economic growth. The ultimate objective is for the public to enjoy quality and efficient services. Available at www.ccp.gov.cn/ppp/ (Chinese).

conforming measures maintained, continued or renewed, by the central government of a party or a regional level of government as far as services and service suppliers are concerned (Arts 8.9-8.12, Chapter 8 Trade in Services, China-Australia FTA). Having said that, further negotiations on progressive service liberalisation are foreseen by both parties (Art. 8.24, Chapter 8 Trade in Services, China-Australia FTA).

On the other hand, the EU-Singapore FTA might suggest a possible, though ambitious, approach to resolving EU negotiations with China on SOEs. SOEs have a strong presence in Singapore and dominate a few sectors, such as financial services and transport. Via GIC and Temasek Holdings, some Singaporean SOEs have become very successful in overseas investment, too. Nevertheless, there are contrasting qualities between Singaporean and Chinese SOEs. SOEs in Singapore are profitable, such as SingTel, DBS and SMRT, and overcapacity is irrelevant to them, as it is to Singapore as a country. In addition to horizontal commitments in Singapore's Schedule of Specific Commitments, which is an appendix to the EU-Singapore FTA totalling 129 pages encompassing almost all service sectors, specific commitments on financial services forms a separate component of the FTA.²²⁹ In general, the specific commitments are entirely subject to all relevant Singaporean domestic laws as long as "they do not circumvent Singapore's obligations" under the specific commitments. Singapore also relinquished some regulatory authority in terms of financial services under Appendix 8-B-2.²³⁰

With respect to a possible Chinese offer on SOEs, three factors should be taken into consideration. First, SOEs collectively form a highly protected protagonist in China's economic life. After all, despite pressure from WTO members, China has offered no SOE as a covered entity under its GPA offers. Secondly, China certainly wishes to further its SOE reforms since the SOE sector remains a huge drain on the economy; overcapacity is the clearest but by no means only element. The question is can China afford the possible collapse of these colossal SOEs after they lose their privileged access to bank loans and the government's policy favouritism and can be subject to bankruptcy. Third, China has reiterated its wish to welcome "external pressure" in order to further deepening reforms, especially after seeing the benefits accrued from opening up the country under WTO rules in the run-up to accession.²³¹ Nonetheless, anyone exerting "external pressure" will be unable, or rather unwilling, to succeed if China's domestic environment is not ready to embrace the changes. The Third Plenum pledged many reform measures, but as it set 2020 as a deadline for implementation, the progress has indeed been slow and much remains to be implemented, which is confirmed by the reality check conducted by the European Chamber of Commerce in China in its Position Paper (2015-16). With regard to the SOE reforms, which are complicated by vested interests including the government's authority to appoint senior

²²⁹ Appendix 8-B-2, EU-Singapore Free Trade Agreement (authentic text as of May 2015, not yet ratified).

²³⁰ For example, by virtue of Art. A.1 of Appendix 8-B-2, "Singapore shall not require product filing or approval for insurance products other than for life insurance products, Central Provident Fund-related products and investment linked products."

²³¹ Based on interview conducted in Beijing, 29 November-4 December 2015.

SOE executives, the next step remains unclear. For example, the term 'mixed-ownership' has still not been fully explained.

Based on the above-mentioned three considerations, it can hardly be surprising that China's approaches to its FTA partners on SOEs are not consistent in detail. As mentioned above, under the China-Korea FTA, the two SOE-dominant sectors of financial services and telecoms are open to Korean investors for competition. It remains to be seen what this openness will mean in actual practice – that is, in light of Annex 8-A-2, China's list of specific commitments, and follow-up negotiations (see also Schott, Jung & Cimino, 2015). In the China-Australia FTA, the principles of transparency, national treatment and most-favoured-nation treatment are repeated in a few chapters, such as those on technical barriers to trade and trade in services. Specifically, "parties' obligations" under the FTA shall take precedence over monopolistic behaviour of service suppliers (Art. 8.23.1, China-Australia FTA). Subsequently, taking the 'negative listing' approach, the chapter on trade in services states that the principles enshrined in Art. XVII of GATT 1947 shall not apply to 'non-conforming measures' maintained, continued or renewed, by the central government of a party or a regional level of government as far as services and service suppliers are concerned,²³² although, as mentioned above, further negotiations on progressive service liberalisation are foreseen by both parties and will maintain the negative listing approach.

Given the distinct points of departure, reaching an overall agreement on SOEs in the framework of an EU-China FTA will most likely start by negotiating on China's offering its SOEs as covered entities under the country's GPA offer. In addition, on the basis of Art. XVII of GATT 1947, it is to open SOE-dominated sectors, for example energy, financial services and telecoms, to European businesses. To set the ambition a level higher, it will be (the original) TPP-like, rejecting exceptions to the "GATT principles" on SOEs; while the greatest ambition will be to reject all non-conformity measures on SOEs while only the clauses contained in the FTA shall prevail. There is no doubt that China seeks to renew momentum, i.e. external pressure, in order to further SOE reforms.

At the end of 2015, the government announced that private businesses are welcome to compete in SOE-dominant industries such as transport, energy, telecom, etc. However, the government will have to remove hurdles to market access, the so-called 'industrial structural policies', to make entry into the private sector possible. Formal openness does not amount to much in the presence of super-dominance and lingering obstacles. Thus no foreign insurers were able to enter the market dominated by 'five brothers', although the government had long since announced that the sector was open to foreign players.²³³ Finally, as to the level of ambition in reaching an agreement on opening up SOEs, given the EU's manifest desire to conclude "deep and comprehensive" FTAs, the question becomes how far China is willing to pursue SOE reforms by relinquishing its regulatory authority, as Singapore did in financial services.

²³² When services are liberalised based on 'negative listing', there are usually several annexes with exceptions, called 'non-conforming measures'.

²³³ Based on interview conducted in Beijing, 29 November-4 December 2015.

14.4 Competition policy

China is probably the world's youngest and increasingly 'must visit' jurisdiction for global mergers, but its competition policy has attracted much controversy since its Anti-Monopoly Law (AML) came into force in August 2008. The AML takes EU Competition Law as its main reference point, as the AML regulates against anti-competitive agreements, abuse of dominant position and concentration, which are echoes of Arts 101 and 102 of the Treaty on the Functioning of the EU and the EC Merger Regulation. By virtue of Art. 2, the AML covers monopolistic operations that have an effect on the Chinese market, which means operations within China as well as activities outside the territory of China that may have eliminative or restrictive effects on competition in China's domestic market will all be subject to the AML. This being the case, antitrust investigations conducted by Chinese authorities increasingly involve EU and other foreign industry at the same time. A large gap between the EU and China on competition exists in enforcement practices, and this is where controversy erupts. Additionally, China's competition policy appears less transparent and therefore enforcement may often look ambiguous. There are still concerns about procedural impartiality, lack of information on AML infringement, as well as the procedural steps and possible consequences if found guilty of AML infringement. Judicial review relating to the AML has yet to be developed further (European Commission, 2015d). The deficiency has significant impact on EU businesses. No complaints are heard from Chinese businesses in Europe about EU competition policy.

However, it is generally agreed that over the years China's anti-monopoly authorities are making progress in improving their case-handling capacity. For example, as far as AML implementation is concerned, MOFCOM has been known for being very slow in clearing merger and acquisition (M&A) transactions, especially in the first few years after the AML came into force.²³⁴ It published Provisional Rules on the Applicable Criteria of Streamlined Cases Regarding Concentrations of Undertakings in March 2014, which established a procedure for accelerated review.²³⁵ Since then, reviews are conducted more efficiently when, for example, in 2015, MOFCOM received 352 applications for the approval of the concentration of undertakings, accepted 338 and concluded 312 cases. Among the closed cases, 310 were unconditionally approved, accounting for about 99% of the total; and 2 were

²³⁴ It took MOFCOM 336 days to conditionally approve the transaction between Western Digital and Hitachi (March 2012), and 417 days to approve that between Mediatek and MStar (August 2013) (US-China Business Council, 2015), in violation of the time limits of 90 days for review and 60 days for an extension prescribed by Art. 26 of the AML. Art. 26 of the AML states that if an anti-monopoly authority decides to conduct a review, the review should be completed within 90 days. The review period may be extended for 60 more days under certain circumstances.

²³⁵ In the first few years when implementing the AML, MOCOM was also known for placing unusual conditions on the transactions before clearing them. For example, when MOFCOM blocked Coca-Cola's acquisition of Huiyuan, the explanation it gave was related to a "conglomerate effects" theory that fell outside international norms. See Bergsten et al. (2014, p. 333).

conditionally approved.²³⁶ The Chinese anti-monopoly authorities also improved AML enforcement by enacting implementing rules²³⁷ and conducting cooperation with other jurisdictions on case reviews, and MOFCOM established the practices of public consultation and engaging external consultants for expert assessment of some case investigations, e.g. P3 Network Alliance.

China's competition policy consists of laws,²³⁸ administrative regulations or implementing rules²³⁹ and ministerial rules, while enforcement is jointly undertaken by three agencies. MOFCOM is responsible for reviewing M&A transactions and other types of proposed business concentrations. The State Administration for Industry and Commerce (SAIC) is in charge of investigating non-price-related monopolistic behaviour, including monopoly agreements, abuse of market dominance, and monopoly control. The National Development and Reform Commission (NDRC) manages enforcement of price-related conduct, including investigations of pricing practices by companies, price-related aspects of monopoly agreements, and company abuse of dominant market position to set or control prices. This enforcement structure embeds fragmentation and confusion – three cooks spoiling the broth – but it nonetheless carries the legacy of the three institutions' analogous functions. For example, SAIC at different administrative levels was responsible for enforcing all the competition laws promulgated prior to AML, such as the Law for Protecting Consumers' Rights and Interests (1993), the Law of the People's Republic of China for Countering Unfair Competition (1993) and the Regulations on Development and Protection of Competition (1980). The Anti-Monopoly Committee of the State Council,

²³⁶ See WTO Trade Policy Review – China (2016), WT/TPR/S/342, p. 90.

²³⁷ For example, China promulgated 1) Measures Concerning the Divestiture of Assets or Business when Implementing Concentrations of Business Operators (December 2014); 2) Provisions to Prohibit Intellectual Property Abuse to Eliminate or Restrict Competition (April 2015). The Provisions aim to address the conflict between intellectual property (IP) protection and enforcement of competition policy. The SAIC IP Rules specify requirements for an operator with a dominant market position to comply with the AML in entering and enforcing IP Agreements related to China. Under the Provisions, an IP agreement related to China is presumptively considered to be in compliance with the AML if: an operator's market share does not exceed 20% of the relevant market, or there are at least four alternative and independent technologies on the relevant market; or, an operator's market share does not exceed 30% of the relevant market, or there are at least two alternative and independent technologies on the relevant market, unless there is evidence that the agreement has the effect of restricting or excluding competition. Available at http://www.saic.gov.cn/fgs/zcfg/201507/t20150721_192800.html (Chinese) (last accessed 16 December 2017).

²³⁸ The framework of China's competition laws includes Anti-Monopoly Law (AML), the Anti-Unfair Competition Law, and the Rules on Acquisition of Domestic Enterprises and the Price Law.

²³⁹ Implementing rules issued so far are related to mainly abuse of dominant position, or administrative monopoly and price fixing. For example, in December 2010, SAIC issued a series of implementing rules such as Regulations on the Prohibition of Monopolistic Agreements, Regulations on the Prohibition of Abuse of Dominant Market Position, Regulations to Stop Acts of Abusing Administrative Power for the Purpose of Eliminating or Limiting Competition, and Regulations against Price Fixing. In the same month, the NDRC issued the Regulations on the Administrative Procedures for Law Enforcement against Price Fixing.

which has overall responsibility for organising, coordinating and guiding anti-monopoly work in China, coordinates the competition policy implementation and enforcement work carried out by the above-mentioned three agencies. All three agencies may issue administrative penalties, including fines, confiscation of illegal gains and cease-and-desist orders. Additionally, parties injured by monopolistic behaviours may take judicial action by bringing their case to the courts.

EU competition law pursues market efficiency and integration (Szyszczak, 2007). Competition policy is crucial to the EU for two main reasons. First, there is the underlying idea that competition and competitive markets are the principal way to serve the economic aims of the treaty. Second, the internal market may fail or yield unsatisfactory results if restrictive business practices could form effective barriers against competition from other member states (Pelkmans, 2006).

Within a broader framework of EU-China bilateral trade relations, the EU's assistance to China's competition policy-building preceded the country's AML promulgation. The EU-China Competition Dialogue was set up in 2004.²⁴⁰ In 2012, the EU and China signed the MoU on Cooperation in the Area of Anti-Monopoly Law, in order to enhance cooperation and coordination on competition legislation by exchanging views in various areas, and particularly in terms of anti-monopoly legislation and enforcement in both jurisdictions.²⁴¹ Thanks to the MoU, DG Competition and MOFCOM cooperated in a few merger reviews, while both sides agreed a guidance document for Cooperation on Reviewing Merger Cases to further improve case cooperation. In the meantime, DG Competition also cooperated with the NDRC and SAIC to strengthen antitrust cooperation.

14.4.1 China's Competition law and EU business concerns in enforcement

A Communist planned economy, China's market model was structured to benefit the state/community but not so much individual consumers. Based on this premise, China has many laws and regulations²⁴² that concentrate production in certain sectors into

²⁴⁰ The Dialogue is a permanent, institutionalised set-up based on an equal footing, with no legally binding obligations on either side. It provides a forum of consultation and transparency between China and the EU on competition law and policy and aims to enhance the EU's technical and capacity-building assistance to China. See European Commission (2003).

²⁴¹ China conducts international cooperation on competition policy issues with other major competition authorities in the world, too. For example, in July 2011, the NDRC, MOFCOM and SAIC signed an MOU on Anti-Monopoly/Anti-Trust Cooperation with the U.S. Department of Justice and the Federal Trade Commission. Also, China participates in competition policy-related activities in the context of APEC, the OECD, and UNCTAD. China is not a member of the International Competition Network and there is no a clear timeline for China to consider joining the network. See WTO (2014), p. 94.

²⁴² These measures are focused in capital intensive sectors, like electricity and transportation, or in industries such as fixed-line telephony and postal services (e.g. for 'universal service' with national coverage), as well as in sectors vital to national security and economic stability, including defence, energy, and banking. Examples of such laws and regulations include the Law on Electricity (1996), Civil Aviation Law (1995), Regulations on Telecommunication (2000), Postal Law (1986), Railroad Law (1991), and Commercial Bank Law (amended in 2003). See U.S. Department of State (2015, p. 13).

monopolies, near-monopolies, or authorised oligopolies which are typically led by SOEs. As a result, it is said that drafting the AML was a highly contentious undertaking and met with strong opposition from powerful SOEs which perceived AML as a threat to their prerogatives (Bergsten *et al.*, 2014). Perhaps as a compromise, SOEs' dominant position and state monopolies seem less affected by the AML. Art. 7 of the AML states that the state protects the "lawful business" conducted by "industries controlled by the State-owned economy and concerning the lifeline of national economy and national security or the industries implementing exclusive operation and sales according to law". At the same time, the state will continue to regulate and control "their business operations and the prices of their commodities and services so as to safeguard the interests of consumers and promote technical progresses."

It is still unclear how Art. 7 will be implemented. Nonetheless, this AML arrangement will prove to be an obstacle to the EU and China reaching an agreement on competition under an FTA, as will be explained later in the chapter. The three AML enforcement agencies have publicly stated that the law applies to SOEs, and have pursued some enforcement actions against them. But the overall message is mixed. For example, in February 2013, the NDRC imposed a fine of €68 million on two state-owned liquor companies for setting a minimum resale price for distributors of white spirit products (David *et al.*, 2013). But on the other hand, it is also said that MOFCOM blocked the transaction of P3 Network Alliance because of Chinese container shipping conglomerates' lobby effort.

The aim of China's AML mirrors competition laws in other jurisdictions, which is to restrain monopolistic conduct, protect fair competition, promote market efficiency and safeguard consumers' welfare. Besides penalising anti-competition behaviours, the AML restricts regulators from abusing administrative monopolies,²⁴³ and this also appears in the NDRC's and SAIC's implementing regulations.²⁴⁴ Business operators are also prohibited from implementing monopolistic agreements and abusing their dominant position by means of administrative decisions, delegations, or regulations. China amended its Administrative Procedure Law in 2014 to allow private parties to sue government regulators for restricting competition through abuse of administrative power. Additionally, Arts 32-37 of the AML restrains the abuse of administrative power meant to eliminate or restrict inter-regional trade in China's domestic market.²⁴⁵ There

²⁴³ Art 8 and Chapter V of the AML deal with administrative monopolies. There are six types of prohibited administrative monopoly conduct as defined in the AML: designated dealing; obstruction of free circulation of products across regions; restriction in tenders; investment or branch establishment restriction; forcing undertakings to pursue monopolistic conduct; and issuing rules with content excluding or restricting competition of the AML.

²⁴⁴ It is reported that, between 2014 and 2015, six cases of abuse of administrative power to exclude and restrict competition were published. Abusive conduct involved were such as designated dealings, organising undertakings so as to lead to a monopoly, and imposing discriminatory qualification requirements on non-local merchandises in bidding. See WTO Trade Policy Review – China (2016), WT/TPR/S/342, pp. 87-88.

²⁴⁵ For example, Art. 33(1) prohibits imposing discriminative charge items, discriminative charge standards or discriminative prices upon commodities from outside the locality, while Art. 33(5) prohibits conduct for the purpose of hampering commodities from free circulation between regions.

is certainly a reason for such precaution. As reiterated in previous chapters, being a component of China's legislation process, local governments are competent to promulgate rules enforceable within the locality concerned. Such competence becomes, nonetheless, often spoiled and distorted to evolve into local protectionism. This is no exception in the context of competition policy. Therefore, although competition policy in the EU and in China somewhat resemble each other, China's AML carries its own characteristics derived from the country's political, social and economic context. In addition to the special treatment of SOEs, the AML's position against administrative monopolies is another example.

EU businesses' complaints against China's competition policy are many, and one of them is that the AML seems to target only foreign businesses. In reality, this allegation may have some truth only in relation to M&A transaction reviews conducted by MOFCOM, while the blanket allegation may be a result of a few high profile AML cases that took place in the summer of 2013.²⁴⁶ In effect, among the firms investigated for price-fixing, there is a fair distribution between foreign and domestic firms. Even with regard to the extraordinary price-fixing investigation against pharmaceutical companies conducted by the NDRC in July 2013, only six of the 60 investigated companies were involved in the Chinese domestic affiliates of international pharmaceutical companies, such as GSK China. Based on the information compiled by the US-China Business Council in 2015, 25% of the pricing investigations carried out by the NDRC involved foreign companies, while approximately 75% involved Chinese companies; 97% of 1,058 M&A transactions since 2008 were approved by the MOFCOM without conditions, while all of the 26 rejected or conditionally approved transactions involved foreign companies; and all of the 22 completed monopoly investigations conducted by the SAIC involved Chinese companies, while foreign companies were involved in two cases (US-China Business Council, 2015).

There is no doubt that within the context of China's competition policy implementation, it is the M&A reviews which have caused most controversies revolving around AML application, practice and procedures. This may be best illustrated by the P3 Network Alliance merger review,²⁴⁷ which was concluded in June 2014. The proposed transaction was eventually rejected by MOFCOM after negotiations on remedies failed, and this caught many by surprise particularly because the US Federal Maritime Commission approved the merger and the European Commission decided not to intervene, although one must note that different jurisdictions do sometimes

²⁴⁶ In August 2013, the NDRC imposed a fine of €100 million in total on the six foreign infant formula companies (i.e. Abbott Laboratories, Biostime International, Dumex, Fonterra, Mead Johnson and FrieslandCampina) for price-fixing. This was the largest fine China has ever levied for AML violation. In July 2013, 60 pharmaceutical companies (including the domestic affiliates of half a dozen international groups, such as Astellas of Japan, Merck of the US and GSK of the UK) were also investigated by the NDRC for controlling input costs and setting drug prices; in the same week SAIC launched an investigation against Tetra Pak for abuse of dominant position.

²⁴⁷ On 17 June 2014, after negotiations on remedies failed, MOFCOM issued its decision of prohibiting the proposed P3 Network Alliance merger transaction among the world's three largest container shipping lines, i.e. Denmark's Maersk, Switzerland's MSC and France's CMA CGM.

decide a particular case differently, and after all the investigated markets among the three competition jurisdictions were different. The P3 Network Alliance case was nonetheless MOFCOM's second prohibition decision (the first prohibition decision was on Coca-Cola/Huiyuan, in 2009) since China's AML came into force, and the first time that MOFCOM prohibited a foreign-to-foreign international transaction.²⁴⁸ Controversies derived from the P3 Network Alliance review typically involve the following.

Firstly, and generally, there is the question of MOFCOM's jurisdictional grounds for conducting a transaction review or, in other words, at which point in time a consortium or other forms of cooperation may give rise to a reviewable transaction.²⁴⁹ In MOFCOM's decision this question was not addressed, and this would make it difficult for companies to conclude definitively that no MOFCOM filing would be required in at least some cases. Indeed, the question concerning notification of antitrust review is a complicated one. This is because, in addition to the relevant governing provisions provided by the AML (chapter 4) on the definitions of concentration, the 2008 State Council Regulations on thresholds, MOFCOM can also conduct within its competence an investigation of concentrations between undertakings which do not reach the notification thresholds, if there are indications that the concentrations are likely to have the effect of eliminating or restricting competition.²⁵⁰ This is said to be an antitrust practice in the US and the EU, but it was not until June 2014 that MOFCOM published the revised Guidance on the Notification of Concentrations of Business Undertakings, which sets out, *inter alia*, the factors it will consider when determining whether a transaction results in "control" or "decisive influence" within the meaning of the AML (triggering a duty to file if the applicable turnover thresholds are met). It is also noted that significant commercial relationships, cooperation agreements, etc., between the transaction parties would establish jurisdiction for review.

On AML application, there is also a debate with respect to whether the AML is an instrument for protecting domestic industry rather than promoting fair competition, because of the way that MOFCOM assesses M&A transactions. As opposed to the EU,

²⁴⁸ Following a nine-month review period, MOFCOM concluded that the merger among the three container shipping firms would lead to the market becoming highly concentrated, increase barriers to entry and confer market power on the three parties of the alliance. The decision was based on the following considerations: i) the degree and scope of cooperation resulting from the alliance, ii) market shares, iii) market concentration level, iv) barriers to entry and v) the impact of the merger on competitors and the industry. See Freshfields Bruckhaus Deringer Briefing (2014).

²⁴⁹ This specific question was raised because of MOFCOM's assessment on the degree and scope of cooperation resulting from the perceived alliance. MOFCOM's review finding was that the P3 Network Alliance would result in a "tight consortium", different from a traditional "loose shipping alliance". Nonetheless, MOFCOM's decision did not explain whether MOFCOM was assessing the jurisdictional basis for its intervention in this case or whether it was, in fact, expressing concerns in relation to the perceived competitive harm arising from the transaction. See Freshfields Bruckhaus Deringer Briefing (2014).

²⁵⁰ Art. 4, State Council Regulation on the Notification of Thresholds for Concentrations of Undertakings.

which often imposes structural remedies, MOFCOM extensively uses behavioural remedies as a condition to authorise a merger transaction, which involve a commitment to engage in a specific conduct to preserve the same competition conditions after completing the merger. The end result of this practice is that the same competition conditions would remain after the transaction.²⁵¹ Thus the ambiguity over whether MOFOM's philosophy for transaction review is to protect competitors or to promote competition.

Secondly, on AML application concerning review criteria, it was suggested, for example, that MOFCOM did not pay sufficient attention to the significant cost savings and other efficiencies the transaction would have created since they were not discussed in MOFCOM's decision. On the other hand, the proposed Alliance did present the case and the US Federal Maritime Commission found that the Alliance would create significant efficiencies for the benefit of consumers.

Thirdly, on how transaction reviews are conducted and in which case it may be related to MOFCOM's overarching jurisdictional authority, by virtue of Art. 28 of the AML, MOFCOM is competent to approve a transaction with perceived anti-competitive effects if it can be proved that there is more positive than negative impact on competition or that the transaction is in the public interest. Therefore, it was suggested that MOFCOM's decision to reject P3 Network Alliance's transaction was based on industrial considerations, i.e. public interests. There was speculation that the proposed transaction was thwarted because of the opposition expressed by China's shipping industry at the public consultation. It was also suggested that MOFCOM's rejection was influenced by the fact that the Alliance's Asia-Europe route, which MOFCOM's investigation focused on, was a strategic and lucrative trade route for China's exporters, ports and container shipping lines, which is a sector facing overcapacity issues and rising costs. These allegations may indeed hold some truth: facing losses and fierce competition among themselves, seen as state-driven, in February 2016 China Ocean Shipping (Group) Company and China Shipping Group merged to create China Cosco Shipping Corporation (COSCOCS). The new company, with a workforce of 180,000 employees, will control one of the world's largest fleets of dry bulk vessels, container ships and oil tankers.²⁵² This merger exercise, presumably approved by MOFCOM, perhaps at the same time reflect the above-mentioned ambiguity in terms of the philosophy applied by MOFCOM while conducting merger review.

Fourthly, review procedure with regard to transparency, impartiality and consistency was raised because, for example, during the consultation period, MOFCOM engaged external consultants to assist its review, but it was unclear if the Alliance

²⁵¹ Behavioural remedies include, for example, price caps; mandatory licensing provisions; and prohibitions on the sharing of information within the merged entity. The EU uses more structural remedies which require the divestment of some of the involved companies' assets in favour of actual or potential competitors in order to maintain the same level of competitive pressure in a market which would otherwise be too concentrated post-merger. See Mariniello (2013).

²⁵² See <https://www.reuters.com/article/us-china-shipping-cosco/china-launches-new-shipping-giant-to-battle-downturn-idUSKCN0VR0AK>.

parties had the opportunity to engage with the external consultants while in general parties did not have such opportunities.

Besides the above concerns, domestic companies' merger notification is equally an issue of worry for the sake of transparency. Domestic mergers are not reported as they should be and there are no punishments for failure to report. For example, none of the 26 rejected or conditionally approved transactions under MOFCOM's investigation involved domestic companies, including SOEs; their transactions are often left uninvestigated (while some of their transactions are not reported to MOFCOM in the first place).²⁵³ Statistics reveal that the largest 110 Chinese SOEs conducted over 900 M&A deals in 2012; of the 20 merger deals evaluated and cleared that year, the only one involving an SOE was the acquisition of one by a foreign buyer (Bergsten et al., 2014:337). This reality has further fuelled the complaint that remedies imposed by MOFCOM on M&A conditional approvals often aim to protect domestic competitors from the potential increase in the competitiveness of the merged companies.

For price-related investigations, the number of cases undertaken by the NDRC has significantly increased in recent years and peaked in 2014 when, taking pricing investigations alone, there were 335 investigations conducted by the NDRC and its provincial branches (as of September 2014)²⁵⁴ – only 20 price-related investigations at central and provincial levels took place between 2008 and 2012. However, enforcement activities are slow. The NDRC and its provincial branches announced only two cases as of May 2015, and fined Qualcomm RMB 6.088 billion (€882.4 million), and Mercedes-Benz CNY 350 million (€48.8 million). Nonetheless, information on many of these investigations conducted by the NDRC is missing, making it difficult to determine their objectives, process and outcomes.²⁵⁵ Consequently, there are also complaints against uneven enforcement in different parts of China due to local interests/protectionism, or favouritism often tied primarily to employment concerns. Moreover, reflecting on the couple of high profile cases concerning infant formula and pharmaceutical companies in the summer of 2014, there is uncertainty over whether the remedy of lowering prices imposed by the NDRC is not motivated by policy considerations, for example on fighting inflation, i.e. perhaps the market should determine the remedy based on the

²⁵³ Note that under the Interim Provisions on Investigation of Unnotified Concentrations of Undertakings, in effect since 1 February 2012, MOFCOM may initiate investigations to determine whether non-notified concentration activities should have been notified and made subject to an anti-trust review. By virtue of Art. 13 of the Interim Provisions, parties to the concentration found at fault may face a fine of up to RMB 500,000 (€64,125) if the investigation finds that the non-notified concentration activity would have required clearance through anti-trust review. MOFCOM may also order that the concentration be reversed. The website of MOFCOM's Anti-Monopoly Bureau publishes "notification of simple case" concerning mergers applied by domestic and foreign firms in China and abroad (<http://fldj.mofcom.gov.cn/article/jyzjzjyajgs/>).

²⁵⁴ Some 10% of these investigations involve foreign companies. See US-China Business Council (2015).

²⁵⁵ For example, for the 335 pricing investigations conducted by the NDRC and its provincial branches, a number which was unveiled by senior Chinese officials, the US-China Business Council in fact only uncovered 36 of them; based on public information about completed cases, 10 were investigated by NDRC at the central level, 16 by NDRC at the provincial level, and one case was investigated jointly. See US-China Business Council (2015).

merits of competition. Overall, the NDRC has investigated sectors of pharmaceuticals, telecoms, banking, food and beverage, infant formula, tourism and chemicals.

Since the AML came into force in 2008, SAIC has also increased its enforcement activities, although many of the investigations were concluded without imposing penalties. Like the NDRC's investigations, publically available information with regard to SAIC's investigations is incomplete and contradictory. It was said that altogether 30 investigations were conducted between 2008 and 2014, but only 14 of these cases were publicly announced (US-China Business Council, 2015). Much information on the investigations as well as on the decisions is not available. Therefore, for the EU, the challenge is to achieve converging rules and procedural standards, in particular with respect to procedural rights of parties to an investigation. On the other hand, the EU has yet to forge enforcement cooperation with the NDRC and SAIC (European Commission, 2015d).

14.4.2 Competition in China's FTAs

Give that the AML came into force only in 2008, FTAs that China signed prior to 2008 do not have a competition chapter. But since then, competition has become a component of every FTA that China has signed with its trade partners²⁵⁶, including Costa Rica, Iceland, Switzerland, South Korea and Australia. Prior to the China-South Korea FTA, the competition chapter under China's FTAs merely affirmed the importance of competition, sometimes including the application to SOEs but only very broadly, unlike Art. 62.2 of the China-Iceland FTA, which sets the framework of cooperation such as exchange of information, and asserts the commitment for cooperation as well as for consultation when disputes arise. In general, the provisions on competition are broad, often without binding effect (unlike Art. 62.3 of the China-Iceland FTA and Art. 10.3 of the China-Switzerland FTA) and not subject to the dispute settlement mechanism (Art. 10.6 of the China-Switzerland FTA).

The competition chapter under China's FTA signed with South Korea and Australia, however, contains much more substance and details, and has greater ambition. For example, the scope of the competition chapter under the China-South Korea FTA is wide. It covers, among others, enforcement principles with transparency, non-discrimination, and procedural fairness as well as the MFN treatment of persons of each party in like circumstances as far as enforcement is concerned, transparency with regard to making available information on competition laws and regulations, written decisions, cooperation in enforcement and the obligation to notification. Notably, all undertakings will be subject to the competition chapter, including those of public enterprises and enterprises entrusted with special rights, which effectively means monopolistic enterprises created by either government as provider of goods and services.²⁵⁷ Both parties are also under the obligation to eliminate anti-competitive

²⁵⁶ Note that the texts of both the China-Georgia FTA and the China-Maldives FTA had not yet been published at the time of writing.

²⁵⁷ Special rights are defined as rights granted by a party government when it designates or limits to two or more the number of enterprises authorised to provide goods or services, other than according

business practices that prevent trade liberalisation; such practices include abuse of dominant position, concentration and concerted practices, etc., meant to thwart competition. But since the provisions are all rather principle-based, it remains to be seen how they can be implemented in the context of the FTA.

Nonetheless, such principles, which are all universally recognised since they also appear in EU FTAs, provide a good basis for the EU and China to open negotiations on competition. Competition is, nonetheless, not an independent chapter under the China-Australia FTA, but rather falls under Chapter 16 on general provisions and exceptions. Art. 16.7 of the China-Australia FTA sets out the provisions on competition cooperation and the scope of cooperation does not go beyond what was signed prior to the China-South Korea FTA and is thus limited to cooperation, which is very surprising

14.4.3 *Competition in EU FTAs*

The EU has preferred to include detailed provisions on competition in trade agreements with third countries but not soft law approaches to substance, such as in the Global Competition Forum and bilateral agreements on cooperation between competition authorities (Mustilli, 2015). Two EU FTAs will be examined below, one with Singapore, a country with a large presence of SOEs, and Vietnam, a country with a Communist and planned economy past. This is based on the consideration that the EU may be able to draw some reference from its experience in competition negotiations with the two countries as they share similar social and economic characteristics with China. For the same reason, China can also find the benchmark and appreciate the EU's disposition towards competition negotiations.

Looking at the EU-Singapore FTA, the chapter on competition and related matters is applicable to public undertakings, as well as undertakings entrusted with special or exclusive rights and state monopolies.²⁵⁸ Section B of the chapter lays down more detailed rules to govern public undertakings, including state monopolies, while both the EU and Singapore are committed to adjusting state monopolies of a commercial character in order to ensure that no discrimination is exercised while procuring and marketing goods and services from the other party.²⁵⁹ Notably, prohibited subsidies are listed under Art. 12.7: any governmental legal arrangement meant to cover debts or liabilities of certain undertakings without any limitation; and support to insolvent or ailing undertakings in whatever form without a credible restructuring plan.

to objective, proportional and non-discriminatory criteria, or confers on enterprises legal or regulatory advantages which substantially affect the ability of any other enterprise to provide the same goods or services. See footnote 51, China-Korea FTA.

²⁵⁸ Art. 12.3.2, Section B: Public Undertakings, Undertakings Entrusted with Special or Exclusive Rights and State Monopolies, Chapter Twelve Competition and Related Matters, EU-Singapore Free Trade Agreement (authentic text as of May 2015).

²⁵⁹ Art. 12.4, Section B: Public Undertakings, Undertakings Entrusted with Special or Exclusive Rights and State Monopolies, Chapter Twelve Competition and Related Matters, EU-Singapore Free Trade Agreement (authentic text as of May 2015).

As to the competition chapter under the EU-Vietnam FTA, following the principles which are similar to what China and its FTA partners committed to, there is a specific subsection that first addresses subsidies with a detailed scope of application and definition, and, as expected, both private and public enterprises are subject to the agreed rules.²⁶⁰ As is the case of the EU-Singapore FTA on competition, there are also provisions governing specific subsidies that may be legal only when certain conditions are met. Those specific subsidies are the same as those listed in the EU-Singapore FTA, which are the government's legal arrangement meant to cover debts or liabilities of an enterprise and the government's support to insolvent or ailing enterprises in various forms.

14.4.4 Conclusion

Comparing the FTAs signed respectively by China and the EU, both sides uphold the same principles on competition, including state monopolies, but China fell short regarding "specific subsidies", namely those subsidies prohibited by the EU in its FTAs with Singapore and Vietnam. This is exactly where challenges will emerge. The EU's attitude is that such specific subsidies would be legal only under certain conditions, while blanket and unlimited subsidies are prohibited. This aspect is highly sensitive, because it directly links to China's ambiguous position, and its often unconditional and substantial subsidies, towards SOEs. China has yet to specify what Art. 7 of the AML means in terms of, for example, "lawful business" and "lifeline of national economy". As to those issues such as procedural rules, transparency, cooperation, capacity-building exercises, etc., which are components under the EU's competition policy in its FTAs, they are presently within the remit of the ongoing EU-China competition dialogue. China pledged the same commitments in its FTAs, too, but will need to improve its technical competence in these issues. One hopes that China can progress in a more expedited manner, so that the gaps between the EU and China are narrow enough to foster a foundation for reaching an agreement on competition policy.

²⁶⁰ Art. x2(3) Section II: Subsidies, Chapter 11 Competition Policy, EU-Vietnam Free Trade Agreement (agreed text as of January 2016).

15. Investment and the Comprehensive Agreement on Investment

As noted in chapter 1, negotiations on the current Comprehensive Agreement on Investment (CAI) are a derivative of the PCA negotiations, in particular, of the trade and investment pillar. The CAI has been negotiated since September 2012. In January 2016, the two parties decided to assume a wide scope of the negotiations, which should improve market access opportunities for their investors, guarantee that they will not discriminate against their respective companies, and provide a high and balanced level of protection for investors and their investments. Key challenges of the regulatory environment, relating to transparency, licensing and authorisation procedures, are also within the scope of negotiations (European Commission, 2016). The CAI is a stand-alone negotiation because in the aftermath of the PCA talks China declared that it took no interest in an FTA with the EU. This probably started to change already in 2012.

Early in 2014, however, China made explicit at the highest political level that it was interested in exploring an FTA with the EU. On 31 March 2014 in Brussels, President Xi made a plea for exploring the idea of an EU-China FTA and repeated it in Bruges on 1 April. This might have been inspired by the newly announced reforms in China, a stronger stance than the previous government, which seemed to shy away from “WTO plus” commitments on liberalisation of tariffs and services (European Commission (2013:17). Given the present study, one may query whether negotiating a CAI might be incorporated in a future FTA. The EU so far has maintained the position that it wants to see a good outcome on the CAI negotiations before taking the next step of exploring, let alone launching, a possible EU-China FTA.²⁶¹ In this chapter, realistic options for the CAI negotiations will be examined, leaving open the option of – perhaps later – incorporating the CAI in a China-EU FTA. However, with the decision to address both investment protection and access for investors to Chinese markets – of course, also for Chinese FDI in the EU – in the CAI, there is a *de facto* overlap with a segment of a future FTA, in particular but not only for services (see also chapter 11).

15.1 Why a CAI?

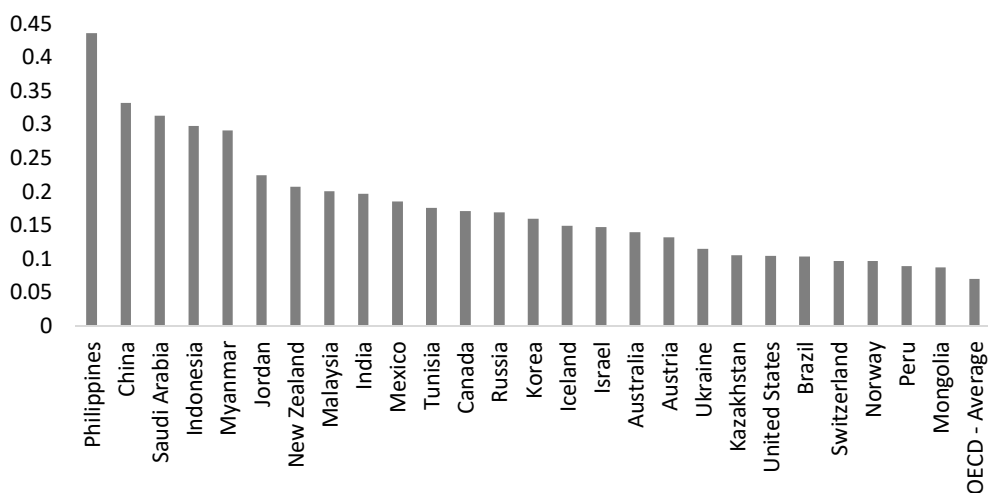
The primary objectives of a CAI are i) to achieve market access for EU and Chinese investors and ii) to provide modern investment protection. Far-reaching restrictions on foreign investors from entering and/or doing business in many Chinese services and goods markets generate a powerful motivation to negotiate a CAI. A second motivation is the fragmentation of investment protection for European firms due to national bilateral investment treaties (BITs) with China, some of which are also hopelessly outdated. A modern EU-wide investment protection agreement would be a valuable improvement. Market access depends essentially on the reach of ‘national treatment’ as well as MFN and the exceptions specified in the treaty (compatible with each economy’s GATS commitments). For this purpose, one can employ negative listing (a list of exceptions to national treatment, also called ‘non-conforming measures’, both at EU and

²⁶¹ In addition, the EU wants to see the results of China’s internal reforms by giving the market a decisive role and the country’s leadership in multilateral trade negotiations. See Malmström (2016).

member state level) or positive listing (a list of ‘specific commitments’ to provide access, which is typically EU-wide) without any further clarification about the restrictions or bans which fall outside the positive list. There is no such thing as a perfect and completely open investment regime, if only for reasons of security or defence. But the ambition to grant degrees of effective national treatment differs enormously between WTO members. This is partly so because the WTO does not incorporate the basics of a WTO-led regime for FDI, except for TRIMs (Agreement on Trade-Related Investment Measures), which is only applicable to trade in goods.²⁶² And there is no other world institution dealing with investment. Among the 62 most important trading countries, including all OECD and G20 countries, China is known to have the most restrictive FDI regime and covers 22 sectors, such as agriculture, mining and quarrying (including oil extraction), manufacturing, oil refinery and chemicals, retail and transport. Thus, China creating a level-playing field for foreign companies already in China or for potential entrants is a very tall order. Once in China, effective and predictable (bilateral) investment protection is equally crucial and represents the classical core of BITs in the world since the 1960s.

Figure 15.1 depicts the OECD 2017 FDI Restrictiveness Index for 26 of the 62 countries. China’s bans and restrictions add up to just below notoriously difficult cases such as the Philippines, Saudi Arabia and Myanmar, and also far higher than the index for other BRICs. There has been some discussion whether or not changes in, e.g. the Chinese Catalogue for Foreign Investment (cf. ch. 11), have been in the direction of a slow opening up.

Figure 15.1 FDI Regulatory Restrictiveness Index in 2016

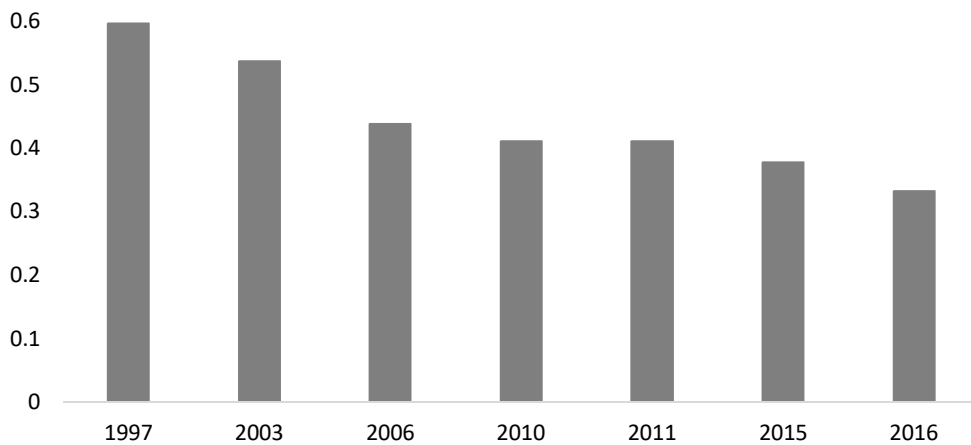


Source: Authors’ own elaboration using OECD (2018).

²⁶² TRIMs address the worst restrictions of investment in trade in goods, e.g. protectionist performance requirements (Annex). Also, in relation to transparency, each member is required to accord “sympathetic consideration” to requests for information-sharing, and afford adequate opportunity for consultation, raised by another member for matters arising from the agreement (Art. 6).

Figure 15.2 shows the index for China over time, indicating clearly that it has been flat for a decade now: the index has not decreased from its high level. One possible explanation might be that the Catalogue is only one of very many legal and other instruments (at more than one level) to regulate FDI and the other ones have, on average, not become more liberal. Figure 15.2 does not seem to accord well with what the reform process in China pretends to do. If reforms are apparently incapable of reducing the worst FDI restrictions among all relevant WTO countries, the credibility of the entire reform process risks being lost.

Figure 15.2 China FDI Regulatory Restrictiveness Index since 1997



Source: Authors' own elaboration using OECD (2018).

In the context of EU-China bilateral investment relations, Chinese companies have relatively easy access to the European market, whereas EU companies face serious access problems in China. Investment obstacles in China are of two types. The first type consists of an overall investment strategy not so much based on principles of free markets (with an exception here or there) but rather on categorising FDI in four classes: prohibited, restricted, allowed and encouraged. The strategy is adapted over time so that it amounts to an industrial strategy or what are called 'structural policies' fitting the five-year plans of China. Therefore, access issues are found in the first three classes in various ways. Even the fourth class (encouraged) might be no longer 'encouraged' in the next period of industrial policy-making. The second type refers to 'post-establishment' when EU (and other foreign) investors experience an uneven playing field for doing business, that is, a myriad of policy restrictions and forms of discrimination.

Over the last decade or so, China has prudently and selectively reduced post-establishment FDI restrictions, although the pattern is not always very clear (as Figure 15.2 confirms). However, one has to realise that this prudent relaxation started from an even more extreme position of restrictiveness and that the OECD FDI restrictiveness index for China today still remains one of the highest of all. As China continues to pursue reforms to further open up its economy, especially in unlocking its service

sector, prohibitions on investment these days might be lifted, except perhaps in sectors concerning national security (which, however, is interpreted very widely by China). More often than not, FDI restrictions protect SOEs' interests, in order to help maintain their dominant positions in the economy. The so-called 'structural policies', which may come in many forms and be enacted by various governmental administrations at different legislative levels, frequently ignore the principles of non-discriminatory treatment and commercial considerations enshrined in GATT, Art. XVII.

As far as investment protection is concerned, all EU member states except Ireland have a BIT with China, though about half are outdated, having been concluded in the 1980s. It is also clear that an EU-wide BIT as part of the CAI will be more attractive than a collection of national ones, as the EU's size and prominence as an investor in China should be a non-legal, but nevertheless crucial advantage (see chapter 15.2). 'Fair and equitable treatment' is the minimum standard for investment protection, besides the basic provisions on expropriation and 'indirect' expropriation. At the moment, the BITs governing the investment protection relations between China and the EU member states (except Ireland) comprise various protection instruments resulting in different levels of investment protection. At the same time, EU businesses complain that China's anti-monopoly laws only target foreign investments. Although chapter 14 shows that this assertion is a fallacy, it nevertheless casts doubts on "full protection and security" – as the minimum – for investment protection, without discrimination against EU business in China.

Chinese investors, though not as vocal as their European counterparts, do have complaints about FDI in the EU, too, arising chiefly from a fragmented, instead of a single, market. Another major problem concerns mode 4 of the GATS, the movement of (business) people relevant for the potential entrant or an already established (Chinese) investor, although there are signs of limited relaxation which will be highlighted later. Perhaps this problem is less appreciated by EU citizens since "the free movement of people" is a way of European life. Moreover, EU citizens enjoy a "visa-waiver" in many countries as a visitor. Chinese citizens' movement to, as well as inside, the EU is subject to visa restrictions, while obtaining a temporary leave to stay for business purposes is a tough undertaking.²⁶³ This can be a problem, if not an irritant for Chinese business persons when visiting Europe. Mode 4 is a complicated amalgam of aspects. First, visa problems are a genuine irritant for Chinese business persons, no doubt, but they cannot be negotiated in a CAI with the EU, for the simple reason that the member states and not the EU level (hence, not the Commission as the EU negotiator) are competent in the matter. Of course, EU member states could jointly try to formulate a common facilitating arrangement, as an accompanying move of the CAI, but that is bound to be

²⁶³ According to the Visa Restrictions Index, a global ranking of countries based on the total number of other countries which they can access visa-free, the Chinese passport ranks 85th/87th in the world (tied with Bhutan, Chad, Mali and Ruanda). As of 1 January 2018/2016, holders of Chinese passports are granted visa-free/visa-on-arrival in 5150 countries and territories. All EU member state passports were ranked in the top 20 except Croatia and Romania, which are tied at 21st. See Henley & Partners (2016).

very cumbersome to achieve. In January 2016, as one of the recommendations for TiSA (Trade in Services Agreement) negotiations, the European Parliament voted to state that the EU's commitments should be limited to "highly-skilled professionals providing a service for a limited period of time and under precise conditions stipulated by the domestic legislation of the country where the service is performed".²⁶⁴

The CAI stands for 'comprehensive' but what does comprehensive imply? At the moment, only some sketchy information on the scope of the prospective CAI is available. The only way to acquire some understanding of this property is to compare different FTAs with an investment chapter aiming at more than a pure BIT such as CETA (as the highest standard in the world), i.e. EU-Vietnam, EU-Singapore and EU-South Korea. For China, which is only beginning to practise this wider approach, the candidates can be China-South Korea²⁶⁵ and China-Australia. The Foreign Investment Promotion and Protection Agreement (FIPA) concluded between Canada and China (and came into force on 1 October 2014) is worth examining, too, since it is regarded as a "high-standard agreement with comprehensive scope and coverage".²⁶⁶

15.2 Why are the existing BITs insufficient?

Currently, 26 BITs²⁶⁷ have been concluded between individual EU member states and China since 1982. The BITs cover all EU member states but Ireland. Obligations pertaining to these BITs are with regard to national treatment and MFN treatment, investment promotion, guaranteeing the freedom to invest as well as free transfer of proceeds. Foreign firms are protected against expropriation and 'indirect' expropriation. Disputes between contracting parties are settled through diplomatic channels, by (domestic) litigation or by arbitral tribunal for disputes arising between the hosting contracting party and the investor. Although some BITs were signed in the early 1980s, they were updated about a decade ago. Changes typically included a wider scope of investment and possible recourse to a new dispute settlement mechanism, i.e. investor-state dispute settlement (ISDS). For example, IPR protection is included in the updated China-Germany BIT concluded in 2003, updating the 1983 version. Some EU member states have not updated their BITs with China, such as Austria, Denmark, Italy and the UK. Their BITs signed in the 1980s are still in force. This brings about an uneven level, as well as standards, of protection for European investors, for example concerning

²⁶⁴ Recommendations included having EU TiSA negotiators deliver international rules and more opportunities for EU firms to supply services such as transport and telecoms in third countries. But "nothing should prevent EU, national and local authorities from maintaining, improving and applying their laws", notably on labour and data protection. See European Parliament (2016b).

²⁶⁵ One might also study the investment chapter of TPP, as this is now the highest standard in APEC and which might, sooner or later, become relevant for China, too.

²⁶⁶ Available at www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/fipa-apie/china-chine.aspx?lang=eng&view=d.

²⁶⁷ For the list of BITs concluded between China and the EU member states, see <http://english.mofcom.gov.cn/article/bilateralchanges/201309/20130900300306.shtml>.

dispute settlement. Second, the scope of the existing BITs does not respond to the needs and demands of today's foreign investment. The existing BITs focus on investment promotion and the freedom to invest (and to transfer proceeds) rather than on market access for investors, where the foreign investment in China is hindered the most.

Hence, beyond the basic protection against expropriation, existing BITs serve little purpose. Furthermore, with 26 scattered BITs, the EU is not able to assert its role in enabling the member states to collectively advance their shared interests in investment. Indeed, there are often complaints about China for playing the game of 'divide and rule'.²⁶⁸ In the meantime, one should realise that China, too, needs an updated CAI with the EU for two reasons: for advancing its increasingly ambitious foreign investment needs and for accelerating domestic reforms. In the process of 'going global', Chinese investors have encountered many obstacles to market access which frustrate their ambition. This issue will most likely become more accentuated once the implementation of the 'belt and road' initiative reaches Europe. In parallel, China is struggling to advance SOE reforms. The benchmark is to adhere to two 'GATT principles' (i.e. non-discriminatory treatment and commercial consideration), in addition to an effective enforcement mechanism.

In order to accomplish this, China has to first tackle SOEs' dominant positions in the economy, to remove their privileges of policy protection under various forms, including easy access to financial assistance, loss coverage and lower capital costs (see also chapter 14), in order to create a level playing field – that is, non-discriminatory market access – for the benefits of its own private businesses as well as of foreign investors. But this is exactly where the impediments lie at the moment. The country announced its new SOE reform goals at the Third Plenum in November 2013 and then repeated them subsequently, for example, in the 13th Five-Year Plan released in March 2016 and at the 19th National Congress of the Communist Party of China in October 2017. But these efforts, so far, appear to have stagnated, and the situation today may be best described as "steps forward undermined by steps back".²⁶⁹ Such delays hinder China's reforms in other aspects of the economy, such as the competition policy for which SOEs' interest is still a taboo but nonetheless must be addressed sooner rather than later, if China wishes to negotiate an FTA with the EU. Somehow, the internal difficulties, perhaps mainly due to the vested interests, may be solved by "external pressure",²⁷⁰ e.g. an EU-China CAI, in which case vested interests must give way to a bilateral legally-binding agreement once it is incorporated into national laws. China's international treaty obligation will then become paramount, and the internal frictions will subside and (ideally) die down eventually.

²⁶⁸ On the other hand, it is quite obvious that China will pursue its own interests single-mindedly and to target individual countries by picking the easiest interlocutors to deal with in order to achieve its aims. See House of Lords, European Union Committee (2010), p. 20.

²⁶⁹ See USCBC China Economic Reform Scorecard: Steps Forward Undermined by Steps Back, October 2016.

²⁷⁰ This argument was repeatedly brought forward by the Chinese policy-makers and think tanks during the authors' interviews conducted in Beijing, 29 November-4 December 2015.

Box 15.1 Notice on Several Measures on Promoting Further Openness and Active Utilisation of Foreign Investment (Guofa [2017] No. 5)

The Notice was issued by China's State Council in January 2017, regarded as a support of President Xi Jinping's speech on globalisation delivered at the World Economic Forum Annual Meeting 2017.

It consists of 20 measures in three sections, in order to show China's willingness to welcome foreign investment into China. As the details of the 20 measures have not been specified, they remain aspirational and unfortunately add to accumulated "promise fatigue" experienced among European businesses.

The three sections as well as the main measures are as follows:

1. Increased openness to foreign investment, incl. to facilitate for qualified foreign personnel to work in China.

The Notice promised that restrictions on market access by foreign investment in sectors, such as services, manufacturing, and mining are to be lifted through an amendment of the Catalogue for the Guidance of Foreign Investment Industries and other Chinese policies and regulations.

Foreign investors will also be encouraged to take part in infrastructure construction through public-private partnerships, establish research and development centres in China, and cooperate with Chinese companies as well as technology and innovation institutions.

2. Maintain fair competition between foreign-invested and domestic companies.

The said fair competition is with respect to implementation of relevant policies and regulations, government procurement, IPR protection, formulation of industry standards, and equity and debt financing. Enforcement agencies are directed to refrain from imposing arbitrary restrictions on foreign investment.

3. Attract more foreign investment

Local governments will be authorised to formulate their own policies to attract foreign investment. Foreign investors are encouraged to locate investments in China's North Eastern and central regions by granting preferential tax, land and financing treatment.

15.3 Investment issues an EU-China CAI should address

The scope of investment is wide, encompassing almost the whole economy and "every kind of asset which is owned or controlled, directly or indirectly, by investors of one Party in the territory of the other Party, which has the characteristics of an investment".²⁷¹ The movement of natural persons falls within the remit, too. But to answer this specific question as to what investment issues an EU-China CAI should address, one has to see the controversies surrounding existing investment between the EU and China with regard to market access and protection. As a general observation, both the EU and China allege rising protectionism by the other side against their investment.

²⁷¹ Art. 1(p), Chapter 1 General Provisions, Section 8 Trade in Services, Investment and E-Commerce, EU-Vietnam Free Trade Agreement (agreed text as of January 2016).

Box 15.2 On investment, pre-market access for investors and establishment

In a CAI dealing with pre-market access and not only with investment protection, one has to appreciate the terminology, gradually developed by trade and investment negotiators, and its meaning. As noted in the main text, investment is usually defined rather broadly, even stretching so far as to include elements of portfolio investments. But the notion of pre-market access here does not strictly relate to 'investment' but to 'establishment'. This is not immediately obvious from the four modes of GATS. The principal reason is that GATS is about services, hence, mode 3 is about investment in services. However, the EU and other countries have introduced 'establishment' for purposes of negotiating 'pre-market access'. On the face of it, 'commercial presence' (GATS terminology for mode 3) and establishment are one and the same thing.

One can of course argue that post-box companies need to be avoided (they are not really a 'commercial presence' in a substantive way, hence, one may require 'substantial business operations'), but otherwise the introduction of the term 'establishment' seems to serve no purpose. The point is, however, that pre-market access for investors relates to 'establishment' in every sense, that is, not only the legal idea of a company but also building a factory or a storage facility, etc. Because of this meaning, the terminology has been 'disconnected' from the GATS: establishment rights under 'market access' relate just as much to goods activities as to services, whereas mode 3 of GATS is only services-related. Market access in the CAI is therefore also of importance to manufacturers wishing to build a plant or extend one or create their own distribution centre, as it is to FDI in services, unless an activity in the relevant sector has been explicitly excluded.

The EU sees plenty of barriers and high potential for investment in China at the same time. The size of the Chinese market and sustained high economic growth is tempting. Although it dropped to less than 7% in 2015,²⁷² and then 6.7 in 2016 while 6.8% is projected in 2017,²⁷³ this growth rate is higher than that of any of the other major economies surveyed by the World Bank, with the possible exception of India.²⁷⁴ China surpassed the US in 2014 as the world's top destination for annual FDI inflows when the country attracted \$120 billion (€99.76 billion) of investment. However, the restrictions on foreign investment in China are numerous and in various forms, such as industrial structural policies, equity caps (especially the imposition of joint ventures) and other disturbances, such as a lack of transparency, corruption and an unreliable legal system (US Department of State, 2015). The mixed picture of potential high reward

²⁷² China's GDP grew by an estimated 7% in 2015, according to the National Development and Reform Commission (NDRC). It is down from the 7.3% growth in 2014. UBS Securities predicted that 2016 will be a "difficult year" in terms of economic development, and GDP growth will slow down further to 6.2% for the whole year. See Flanders-Chinese Chamber of Commerce (2016). One should add that there is widespread mistrust, but no proof, of China's growth figures.

²⁷³ The World Bank also estimated that China's GDP growth is expected to decelerate to 6.4% in 2018 and 6.3% in 2019. (see <http://www.worldbank.org/en/country/china/publication/china-economic-update-december-2017>),

²⁷⁴ Available at <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>.

and pre- and post-establishment restrictions may be best illustrated by foreign insurance companies' performance in China: their (low) market share is steadily increasing and premium totals increased by as much as 22.95% from 2014 to 2015. The China Insurance Regulatory Commission (CIRC) admits nonetheless that foreign insurers' business scale remains limited in China.²⁷⁵ It was also revealed that some foreign insurers were compelled to withdraw from China due to the discriminatory structural policies, from which only the 'five brothers' (who all made it into the Fortune Global 500 consecutively) may profit.²⁷⁶

Box 15.3 Chinese FDI and centralising EU investment policy at home?

The EU has no FDI screening or approval regime at EU level. In September 2017, in order to protect its strategic interest, the Commission unveiled its proposal to set up a European framework for screening foreign direct investment into the EU, as well as a coordination group with member states to help identify joint strategic concerns and solutions in the area of FDI. Grounds for FDI screening are said to be security or public order, including transparency obligations, the rule of equal treatment among foreign investment of different origin, and the obligation to ensure adequate redress on decisions adopted under these review mechanisms. Projects or programmes of Union interest are in the areas of, for example, research (Horizon 2020), space (Galileo), transport (Trans-European Networks for Transport, TEN-T), energy (TEN-E) and telecommunications.²⁷⁷

EU member states differ in this respect, from having no regime whatsoever (for many) to various forms of screening mechanism which are presently in place in 12 member states.²⁷⁸ This is in sharp contrast to China where FDI may be forbidden or restricted in a number of sectors but when allowed or even encouraged, there is still an approval system on a case-by-case basis which creates permanent uncertainty and a sense of arbitrariness. Countries like the US, Canada and Australia all have screening/approval

²⁷⁵ During 2014, the market share for foreign players reached 4.5% compared with 3.9% in 2013. The market share for foreign life insurance companies showed a steady increase rate during the past year and reached 5.78%, while foreign property insurance companies managed to gain a 2.22% market share. The premium for foreign insurance companies in 2014 was RMB 734 billion in total, a jump of 22.95% year-on-year. See European Chamber of Commerce in China (2015, p. 377).

²⁷⁶ Based on interviews conducted in Beijing, 29 November-4 December 2015

²⁷⁷ See State of the Union 2017 - Trade Package: European Commission proposes framework for screening of foreign direct investments, Brussels, 14 September 2017. Available at <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1716> (last accessed 6 January 2018).

²⁷⁸ The 12 countries are: Austria, Denmark, Germany, Finland, France, Latvia, Lithuania, Italy, Poland, Portugal, Spain, and the UK. In the case of the UK, the government is conducting a national security and infrastructure investment review at the time of writing. The reform intends to 1) in the short-term to broaden Enterprise Act powers by lowering the threshold for intervention in specific sectors where national security issues will most likely be engaged, i.e. dual use/military use as well as parts of the advanced tech sector; 2) in the long-term, be able to scrutinise more systematically transactions from a national security interest perspective – by being made aware of them through voluntary notification or mandatory notification in some essential sectors/functions (e.g. nuclear, defence, energy, etc.). For details, see: <https://www.gov.uk/government/consultations/national-security-and-infrastructure-investment-review>.

regimes, the key criterion being national security (which can be stretched to include national economic security).*

In the EU, during the financial crisis, several Commissioners and some MEPs advocated for FDI screening but no proposals were tabled. But the unease about Chinese FDI in the EU has increased, especially with a fairly sharp rise in incoming FDI from China in 2014 and 2015, including some spectacular takeovers. Strictly speaking, this is not an FTA issue. But given the CAI negotiations and the importance of Chinese FDI in Europe nowadays, it is important to be aware of this debate and the thrust of it. Much of the debate can be appreciated by the contrast between two contributions, one by Alan Riley (2016) arguing strongly for detailed scrutiny and some prior conditions (but not primarily focused on security), and one by Cora Jungbluth (2016) emphasising the positive contribution of Chinese FDI in Europe and reminding readers of the logic of Chinese business 'going global'.

Riley's many points cannot all be reiterated. He emphasises the lack of reciprocity, but, above all, the opaqueness of Chinese corporate law obligations (such that elementary information is not available for some large companies – the stunning example being an insurance company suddenly attracting capital from 31 investors and thereby becoming six times as big, subsequently making a series of sizeable takeovers on a cash basis and not having to report at all), the omnipresent, 'invisible' hand of the Party and the state in influencing Chinese business (and private life) (in court, not disclosing the hand of the Party could be regarded as a 'material non-disclosure'), the practical options for Chinese 'zombie' companies (loaded with debt) to still go for M&A in Europe, and some problematic features about tacit collusion between Chinese companies coming to the EU.

Jungbluth compares screaming headlines in European newspapers ever since 2006 (about a Chinese tsunami, etc.) with the hard data available about Chinese FDI in the EU, flows and stocks (see also chapter 3) which do not confirm anything even remotely close to 'buying Europe'. She recalls the 'recognisable bias' of the US CFIUS (approval/scrutiny organ) and argues that Chinese investors in the EU typically do not behave short-term but rather like strategic investors do. She also notes that Chinese FDI does not even reach 1% in the OECD countries, and two-thirds of the Chinese FDI flow went to Asia. The author laments the fragmented EU stance (member states competing against each other) *vis-à-vis* Chinese FDI.

Note that Chinese FDI transactions in the EU totalled \$3.87 billion (€3.22 billion) in 2Q 2017, which is the lowest level since 4Q 2015. On a global scale, according to MOFCOM, China's non-financial outbound FDI decreased 46% year-on-year in first half in 2017, totally \$ 48.2 billion (€40.07 billion).²⁷⁹ The sharp drop may be due to regulatory scrutiny exercised by the Chinese government on capital controls and cracking down on "irrational" acquisitions by domestic firms abroad, especially in the sectors of real estate, culture, sports and entertainment. As a further development, on November 3, 2017 National Development and Reform Commission issued the Administrative Measures for Outbound Investment of Enterprises for public comments.

* For a careful survey with data on the US approval (CFIUS) of Chinese FDI, see Bergsten, Hufbauer & Miner (2014), pp. 273-279.

²⁷⁹ See EU-China FDI Monitor, 2Q 2017 Update: Public Version, Rodium Group. Available at http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc_156032.pdf.

The regime governing China's foreign investment is over-regulated. In addition to the three core laws, i.e. the China-Foreign Equity Joint Venture Enterprise Law, the China-Foreign Cooperative Joint Venture Enterprise Law, and the Foreign-Invested Enterprise Law, the State Council, many ministries as well as local legislatures and governments are all competent to, and they do, enact rules and issue regulatory documents, making the country's FDI legal system very opaque.²⁸⁰ Moreover, as the divide between policy and law has become increasingly blurred in recent years, since government policy announcements may become guiding legal instruments as well, significant and indeed disturbing policy discretion is observed especially when the government wishes to adapt decisions to changing circumstances.²⁸¹ The five-year plans, as well as measures issued pursuant to the Third Plenum, illustrate this tendency. This practice causes the whole investment regime (and other trade regimes, too) to be unpredictable, arbitrary and discretionary. Worse still, despite all the investment laws, rules and policies, China approves foreign investment on a case-by-case basis following reviews conducted by multiple government agencies, which culminates in conflicts of interest and inconsistencies. This is the more so as Chinese provinces often compete to acquire attractive FDI and use visible and invisible forms of persuasion. As a result, exceptions to the governing laws unexpectedly emerge and corruption is easy to embed. Foreign investors may be lucky enough to benefit when they can exploit their local connections or political influence, but this only happens to big market players. SMEs rarely benefit, and often fall victim to the opaque and discretionary investment regime. Of course, none of this helps to remedy the lack of a level playing field.

Against the backdrop of the EU single market and its FDI regime, the "country report" (on the EU) compiled by MOFCOM highlights a general complaint among the Chinese investors in Europe: the lack of harmonised policy towards foreign investment. Different member states have their own laws, policies and practices and these are thought to have a greater impact on Chinese investors than the EU policies, although, according to the Lisbon Treaty, foreign investment has shifted to EU competence. This begs the question whether EU powers (should) imply uniform EU rules without

²⁸⁰ It is reported that there are over 1,000 FDI rules and regulations issued by government ministries, such as the Guiding Catalogue of Foreign Investment Industries, the Provisions on Mergers & Acquisitions of Domestic Enterprises by Foreign Investors, etc. This is in addition to FDI laws, such as the China-Foreign Equity Joint Venture Enterprise Law and the Foreign-Invested Enterprise Law; administrative regulations governing FDI issued by the State Council, such as the Implementation Regulations of the China-Foreign Equity Joint Venture Enterprises Law and the State Council Provisions on Encouraging Foreign Investment. There are equally local legislature and governments that enact their own FDI rules and regulations. See U.S. Department of State (2015).

²⁸¹ As is always the case, industrial promotion policies are announced as law and often promote national strategic sectors. An obvious example is the country's Five-Year Plan. The consequence is that foreign investments are restricted and often the chances for fair competition are reduced. For example, a major goal stated in the 12th Five-Year Plan is to encourage the domestic development of technological innovation and know-how. Thus, investment projects that involve the transfer of technology or the potential for "indigenous innovation" tend to be favourably received by China's investment authorities, while domestic firms receive favourable treatment with, very often, easy access to bank loans or investment funds, especially as a start-up.

national exceptions, or allow lingering national restrictions. The FDI policy transition from the member states to the EU-level has yet to be completed after the Lisbon Treaty came into force. This may easily take another decade or so. The above perception may explain why, in investment, China prefers to deal with the member states, and this is interpreted in EU circles as an approach of 'divide and rule'.²⁸²

At the level of member states, Chinese investors frequently complain about rising protectionism in the form of investment restrictions, especially in the sectors of real estate, fisheries, transport, agriculture and media, often on equity holding. Amongst EU member states, Poland and Greece set the highest thresholds for setting up businesses. Another issue of fragmentation in the EU market is that, for example, the tax base and rates of corporate taxation are not uniform. The average tax rate is 23.2%, while Malta has the highest rate at 35%.²⁸³ Moreover, in the case of investment coming from third countries, EU countries impose restrictions on qualifications of expatriates (such as the recent European Parliament recommendations on TiSA negotiations) as well as on trade reciprocity. Reciprocity requires favourable business considerations to be obtained via bilateral cooperation on market access. Although in principle such demands hold some merit, when different reciprocal sectors multiply by 28 (member states) it may become a very challenging maze for foreign investors to navigate. For example, Austria requests mutual market access on large-scale mineral extraction, processing and storage; refinery operations, gas, gas stations and geothermal production; fuel trading; transportation services investments, including road freight, taxis and buses; the establishment of tour operators as well as sale points. Reciprocity requirements in Ireland will arise when foreign companies acquire Irish vessels. Italy has reciprocal market access demand on exploration and exploitation of liquid or gaseous hydrocarbons (Chinese Ministry of Commerce, 2015:27-28).

Certainly, despite the restrictions, China sees lots of potential in its investment in the EU, which is yet to be fully realised. Despite the investment surge in recent years, Chinese FDI in the EU is still lower than what the EU invests in China, which accounts for some 2-3% of the Union's overall investment abroad.²⁸⁴ In fact, overall, Chinese FDI is increasingly attracted to large markets in the OECD group instead of its initial focus on non-OECD countries with large natural resources and poor institutions (Copenhagen Economics, 2012:20). The investment sectors have become much more

²⁸² A House of Lords report in 2010 suggests that China has difficulty with the political nature of the EU and its decision-making process and finds it complex and incomplete as a system of governance. For this reason, China often feels more comfortable with the member states where lines of authority are clearer. This view may change if the EU becomes more effective in unifying its FDI regime, following the implementation of the Lisbon Treaty. See House of Lords, European Union Committee (2010), p. 20.

²⁸³ It is well known that nominal corporate tax rates say practically nothing about the effective tax burden of companies. The latter is better approximated by the so-called 'effective corporate tax rates' which depend on the tax base and all kinds of special rules and exemptions. For the great differences between effective and nominal corporate tax rates, see, e.g. Devereux & Sorensen (2006).

²⁸⁴ Available at <http://ec.europa.eu/trade/policy/countries-and-regions/countries/china>. See also chapter 3 for bilateral FDI trends.

diversified, too. For example, in 2Q 2017, Chinese investors completed 23 M&A deals worth \$3.6 billion (€2.99 billion) in Europe. The sectors encompass sports (AC Milan, Italy), aerospace (Gardner Aerospace, UK), real estate (DoubleTree Hotel, the Netherlands), energy (ADMIE, Greece) and transport, in which case COSCO purchased a stake in Spanish port Noatrum, worth \$227 million (€188.71 million).²⁸⁵ For example, On the other hand, one has not heard any Chinese complaints about investment protection in Europe so far.

Summarising the above-mentioned obstacles to market access as well as impediments to effective investment protection, the scope of CAI may encompass better regulations (streamlining and harmonisation in both parties' regimes), selective facilitation of movement of business-related persons under mode 4 and effective enforcement and predictability of FDI protection. Following the EU's modality of FTA negotiations, the CAI should "specify and complement" the existing universally applicable investment rules and principles.

15.4 EU approach to CAI

In the following, inferences about the CAI will be derived from a few FTAs the EU has concluded which include investment. Note that the EU gained its exclusive competence in FDI thanks to Art. 207(1) of the Lisbon Treaty, after it came into force in 2010. Before 2010, investment fell within the joint competence shared between the EU and its member states. Referring to the EU-Vietnam FTA, measures on investment are brought together with trade in services and e-commerce under Chapter 8 (a combination also practiced in CETA). The scope of investment is wide. The chapter provides full protection and security of investment by incorporating consultation, negotiations and mediation as the lighter and alternative dispute resolution which may be used prior to bringing a dispute between an investor and the hosting state to the investment tribunal. Procedures, code of conduct for members of the tribunals and for mediators, etc. are specified in the agreement. Equally specified are provisions concerning temporary presence of natural persons for business purposes, while the EU and Vietnam will hold discussions to review possible movement of independent professionals in five years' time after the entry into force of the FTA. The agreement abolishes the "performance requirements" in both trade in goods and trade in services, which goes beyond the remit of TRIMs. With annexes on schedule of commitments on establishment, mode 4 and cross-border supply of services governing both sides, Chapter 8 under the EU-Vietnam FTA resembles a CAI.

China has a more matured foreign investment system (although it does not bring about more openness) because China opened up its market to foreign investors decades earlier than Vietnam did, while the scale of foreign investment in China is also much bigger. For example, in 2015, EU investors committed a total of \$1.3 billion (€1.1 billion) in FDI and became Vietnam's third largest foreign investor partner. But compared to China, the size of the EU's FDI in Vietnam counts for less than one-hundredth since the

²⁸⁵ See EU-China FDI Monitor, 2Q 2017 Update: Public Version, Rodium Group (see http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc_156032.pdf).

EU FDI stocks to China reached €127.7 billion in 2013. Therefore, one may wish to examine another alternative modality as a reference for the EU-China CAI negotiations.

In recent years the EU and Singapore have seen regular growth of trade in goods (17% between 2008 and 2014), trade in services (40% between 2008 and 2013) as well as in bilateral foreign direct investment. After all, Singapore is a major destination for European investments in Asia, as well as Asia's second largest investor in the EU (after Japan). In 2013, the existing stock of bilateral foreign direct investment between the EU and Singapore was roughly €140 billion.²⁸⁶ In addition, Singapore has a considerable presence of SOEs, as mentioned in chapter 14. Based on these considerations, the investment chapter in the EU-Singapore FTA might be a more suitable example for EU-China negotiations.

However, one should note that the specific investment chapter (Chapter 9) under the EU-Singapore FTA is on investment protection only, while the question of market access and essentially of services and establishment is to look at the whole FTA for, for example, services, establishment and electronic commerce (Chapter 8) which also sets down specific commitments for cross-border supply of services (Appendix 8-A-1), establishment (Appendix 8-A-2), key personnel, graduate trainees and business services sellers (Appendix 8-A-3), government procurement (Chapter 10) and IPR (Chapter 11). Under Chapter 9, investment protection has blanket coverage so that all investments (as well as its investors), regardless of whether they were concluded before or after the entry into force of the agreement, are covered by the provisions of the chapter (Art. 9.2.1, EU-Singapore Free Trade Agreement; authentic text as of May 2015). At the same time, provisions on investment protection are very elaborate, too, as is the case of the EU-Vietnam FTA with the same depth and breadth. The EU-Singapore FTA offers ISDS as a means of protection as well as of alternative dispute resolution such as consultation and mediation, with details on procedures of mediation, code of conduct of mediators and arbitrators, etc. The EU-Singapore FTA provides an additional guarantee on public access to information, concerning documents, hearings and the possibility for third persons to make submissions. A number of sectors/activities, such as government-supported loans, guarantees or insurance, are outside the coverage of the "fair and equitable treatment" obliged by the chapter²⁸⁷ but are addressed in other chapters. For example, the issue of government subsidies is addressed in Chapter 12 on competition policy and related matters.

Taking a negative-listing approach, the EU-Canada Trade Agreement (CETA) is applicable to all investors and investment with regard to *establishment* as well as to *operation*, but air services fall out of the coverage while financial services under bilateral trade are dealt with in a separate chapter. On establishment, audio-visual as well as cultural services are reserved sectors for Canada and for the EU, respectively. Under

²⁸⁶ See <http://ec.europa.eu/trade/policy/countries-and-regions/countries/singapore>.

²⁸⁷ Moreover, a government's decision not to issue, renew or maintain a subsidy or grant shall not be considered a breach of the "fair and equitable treatment" principle or an expropriation provided the decision itself does not contravene with the relevant domestic laws or conditions attached to such subsidy or grant. Art. 9.2.2, EU-Singapore Free Trade Agreement.

the Investment Chapter, Section 5 imposes restrictions and exceptions in relation to national treatment and most-favoured-nation treatment which encompasses investment areas of IPR, government procurement, etc., in which case pre-existing non-conforming rules remain. In respect of investment protection, again a whole package of protection means is in place, from consultation, mediation to ISDS, with lengthy stipulation on procedural rules, including enforcement. "Performance requirements" are completely prohibited under CETA.²⁸⁸ CETA also ensures that appointment of senior management and boards of directors is not restricted by nationality.²⁸⁹ CETA is advanced and ambitious also in aspects of mode 4.

A similar protection provision is equally hailed as an achievement by TPP and is also identified in FIPA signed between Canada and China in Art. 7,²⁹⁰ but it is absent in China's FTAs. This suggests that on specific issues China's CAI modality could become indeed very advanced and ambitious – perhaps when the counterpart has the right powerful leverage. Coming back to CETA, it is interesting because it is the first important FTA where the EU has agreed to negative listing. This matters for the China-EU case because China also started to engage negative listing, for example in its BIT negotiations with the US and in the Shanghai Pilot Free Trade Zone which is seen as an incubator for China's further economic reforms in the areas of trade openness, investment liberalisation, administrative and financial reforms. The set-up of the Shanghai pilot project is now being imitated in 10 other cities and provinces as of January 2018.²⁹¹ And it is said that the whole package would eventually be extended to the entire country. This can be interpreted as both good and bad news. The good news is that negative listing would compel the Chinese government to be precise and detailed about lingering restrictions (on the negative list) beyond which no interventions would

²⁸⁸ Art. X.5, Performance requirements, Section 2: Establishment of investment, Chapter 10 Investment, EU-Canada Trade Agreement. Note, however, that some problems might nevertheless arise under the Domestic Regulation chapter (e.g. licensing).

²⁸⁹ Art. X.8, Senior Management and Boards of Directors, Section 3: Non-discriminatory treatment, Chapter 10 Investment, EU-Canada Trade Agreement. Note that this provision does not apply to non-conforming measures. Art. X.14.1&2, Section 5: Reservations and Exceptions, EU-Canada Trade Agreement.

²⁹⁰ Art. 7 of the FIPA stipulates that for senior management positions, there should be no specific requirement of any particular nationality. For the board of directors, a particular nationality may be required but provided the requirement does not affect an investor's control over its investment. However, Art. 7 is subject to the exceptions listed by Art. 8.2 concerning "non-conforming measures".

²⁹¹ See http://wzs.mofcom.gov.cn/article/zt_zymysyq/column02/zhl/201712/20171202690196.shtml (Chinese).

Reflecting on the authors' interview trip conducted in Beijing, 29 November-4 December 2015, reactions to the Shanghai Pilot Free Trade Zone project were mixed. (There were four FTA zones then, namely Shanghai, Tianjin, Guangdong and Fujian.) While Chinese interviewees were more enthusiastic and looked forward to the success of the zones' experiments, their European counterparts were much more cautious. One reason for that is that the four zones' opening-up is no different from what the Foreign Investment Industrial Guidance Catalogue has defined. Besides, the four zones test only methods (to test trade facilitation measures, for example) but not outcomes. Therefore, the four FTA zones have shown no evidence of accelerating the opening-up, impact or concrete outcomes.

be allowed. This alone would very significantly improve legal certainty and clarity about the investment/establishment regime, in sharp contrast to the situation today. The Chinese government may well be motivated to go for negative listing in its future FTA negotiations as an extra incentive to make a clean sweep of the maze of restrictions and rules of (too) many ministries, agencies and other authorities, the very over-regulation indicated before. The bad news is, presumably, that negative listing will remain at the central government level. For FDI it would be very difficult for the central government to implement the obligations at the provincial, or lower administrative, levels. (Or, possibly, discrepancies between the central and lower administrative governmental levels in terms of investment restrictions/liberalisation would remain, given China's multi-tiered administrative structure, as pointed out in various chapters of the study.)

Moreover, it is, above all, the US government that has been pushing China for many years to adopt a negative listing approach for investment. While it succeeded in the ongoing US-China BIT negotiations (apparently unhindered²⁹² despite many disputes and allegations), it is the same US government which has been extremely casual (to say the least) about the sub-central level in the past TTIP discussions whilst having excluded it in the TPP original text. With even TPP, now known as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), excluding the sub-central level so that negative listing fails to bring clarity, there is almost certainly no way China can be convinced to adopt negative listing other than at the central level. In CETA, however, Canada and the EU have introduced negative listing for both central and sub-federal levels.

15.5 China's approach to CAI

In the China-South Korea FTA on investment, the movement of business-related persons is a standalone chapter (Chapter 11) with lengthy rules on visa facilitation, and preceding the investment chapter. Therefore, investment facilitation with regard to mode 4 movement is identified as a specific commitment and precedes investment, which shows that mode 4 carries greater significance for China than for other countries. As noted before, this is quite understandable, as at the moment holders of Chinese passports managed to rank only 85th87th in the worldwide Visa Restrictions Index listing, while obtaining temporary leave to stay could be a tough undertaking for business visa holders. In terms of investment operation, the investment chapter permits some degree of reservations and exceptions such as, for example, 'non-conforming measures' existing before the entry into force of the FTA (Art. 12.3.2), but both parties pledge to progressively remove all these non-conforming measures. "Performance requirements" are in compliance with TRIMs, and therefore only performance requirements for trade in goods concerning export and technology transfer are abolished. Local content and localisation are permissible as long as the measures are in conformity with the TRIMs (Art. 12.7.1), which is incorporated in the agreement.

²⁹² See "Investment negotiations to continue unhindered", China Daily, 9 November 2017 (http://www.chinadaily.com.cn/business/2017-11/09/content_34307935.htm).

Provisions on investment protection are brief, although the ISDS mechanism is available, in addition to consultation. While the minimum protection standard must be “fair and equitable”, the relevant provisions are much less elaborate than in the FTAs mentioned above as well as in CETA, where a precise definition is provided and five (non-exhaustive) examples have been incorporated in the text. Bilateral investment negotiations on market access are scheduled to commence two years after the agreement enters into force. As to investment protection, the pre-establishment phase of investment is not covered under national treatment, which covers only the “management, conduct, operation, maintenance, use, enjoyment and sale or other disposition of investments”. Moreover, national treatment does not apply to existing non-conforming measures.

Looking at China's FTA concluded with Australia on 17 June 2015, the investment chapter (9) in the China-Australia FTA is in fact a tentative agreement, since it is foreseen that in three years after the entry into force of the FTA both parties shall conduct a review to determine whether negotiations of a comprehensive investment chapter could be envisaged. Art. 9.9.3 of the agreement provides a long list of foreseen negotiation topics, including minimum standard of treatment, expropriation, performance requirements, senior management and board of directors, investment-specific state to state dispute settlement, the application of investment protections and ISDS to services supplied through commercial presence and, most notably, scheduling of investment commitments by China on a negative list basis (Art. 9.9.3(c)). At the moment, the investment chapter excludes government procurement and loans and grants provided by a government (Art. 9.2.3). Non-conforming measures remain, although both parties have pledged to reduce them progressively (Art. 9.5.4). For investment protection, following the China-South Korea FTA, the “pre-establishment” phase of investment is not covered under national treatment, while what is covered are “expansion, management, conduct, operation and sale or other disposition of investments in its territory” (Art. 9.3.4). The ISDS measures contained in the agreement are as elaborate as those concluded between the EU and the third countries, with specified provisions on procedures and conduct of mediators and arbitrators, etc. Movement of natural persons is a separate chapter from investment under the China-Australia FTA, with elaborate provisions, too. Movement of business visitors, intra-corporate transferees, independent executives, contractual service suppliers, installers and servicers and accompanying spouses and dependants are all facilitated, while movement concerning senior management and board directors will be negotiated three years after the agreement entered into force.

After examining the investment chapter under the China-South Korea and China-Australia FTA, respectively, it is noticed that both agreements actually overcome only some of the investment impediments, in terms of market access and protection. For protection, the same ISDS instrument and alternative dispute resolution are available, but the levels of precision differ; this modality is also seen with regard to movement of business-related persons while the question of nationality of senior management and directors is still left unanswered, although this is not the case under the FIPA between Canada and China. The commitment concerning “performance requirements” appears half-hearted under the China-South Korea FTA while they are completely missing in

the China-Australia FTA. It's noted that China and Australia duly launched the process of further negotiations in order to reach a CAI, by virtue of Art. 9.9.3 of the agreement. In March 2017, the Declaration of Intent on the Deliberation of Related Contents of China-Australia FTA was signed, thereby announcing that the two countries will start the deliberation on the Services Chapter, the Investment Chapter of China-Australia FTA and the Memorandum of Understanding on Investment Facilitation Arrangement in 2017.²⁹³ This action goes counter to the EU's attitude towards China's FTA plea, i.e. "CAI first, FTA later". This begs the question: Does sequence matter? Probably not, not least in relation to investment, as will be elaborated later.

Reflecting on the FIPA, it is probably the most ambitious CAI that China has concluded so far with regard to the concession of the nationality of senior management and the board of directors. FIPA prohibits "performance requirements" based on the TRIMs requirements which cover trade in goods only. This arrangement, though perhaps ambitious for China, is short of the EU's expectation by half. The EU counts on a TRIMs-plus approach, which prohibits performance requirements in both trade in goods and trade in services, as in its FTAs with Vietnam and Singapore. As to investment protection, disputes are to be settled at tribunal. For obligations pertaining to national treatment and most-favoured-nation treatment, again, the pre-establishment phase is not covered by national treatment, and what is covered by FIPA is all investors and investments "in like circumstances" with regard to "establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments" (Arts 5 and 6). Pursuant to the "national treatment" obligations, "non-conforming measures" apply (Art. 8) but then FIPA does not offer much detail. This illustration simply confirms that China's investment regime is only half-open, and remains so despite all the bilateral negotiations and conclusions on investment. Therefore, one must conclude that, comparing what China has offered in its FTA and CAI and what the EU has obtained on market access and protection, the gap is wide.

15.6 What's next?

After having examined the modalities of investment negotiations applied by the EU and by China, both sides would have to ponder a few questions. First, whether they would accept a staged approach to CAI negotiations, recognising the wide gap of expectations between them. A first stage would collect what can be agreed on initially, whilst leaving unresolved matters for further negotiations but making them explicit and with a time frame. The movement of business-related persons should be carefully considered when negotiating with China on investment and investors. This is probably why such movement (mode 4) is a standalone chapter in the two FTAs China concluded in mid-2015, while MOFCOM raises this complaint consistently. Of course, with such a two-stage approach, there is a strategic dilemma for the EU: What leverage would the EU

²⁹³ See China and Australia Sign the Declaration of Intent of the Government of Australia and the Government of the People's Republic of China on the Deliberation of Related Contents of China-Australia FTA, MOFCOM, 27 March 2017 (http://fta.mofcom.gov.cn/enarticle/enaustralia/enaustrianews/201704/34599_1.html).

still possess in investment negotiations with China when China would already obtain visa facilitation (say, with the help of the member states) in the first stage? The answer critically depends on the two motives, mentioned before, that China has for negotiating a CAI: reform at home and more uniformity in the EU with respect to its FDI. If these motives are strong enough, the sequencing with visa facilitation may not matter much; otherwise, a single package approach seems superior. Second, China may be a ready counterpart for ambitious negotiations (at least) on certain aspects of investor/investment; the question is what the EU holds as bargaining chips/leverage in order to obtain specific concessions from China. Third, which comes first? CAI or FTA? China's attitude looks flexible, while the EU is determined to conclude a CAI first in order to see "a good outcome" as a condition for launching possible FTA negotiations with China.

In any case, it's easy to perceive that the EU will seek to conclude a very ambitious CAI with China, with comprehensive scope and coverage of market access and protection, specific schedule of commitments and limited reservations and exceptions. For investment protection, the protection means China is capable of providing are as complete as those offered by the EU. The only question is how to elaborate more detailed rules for certainty and predictability, while the EU will probably request using CETA as an example. Therefore, ISDS, which is now in place between China and some member states, will require a serious upgrade, with precise and detailed provisions concerning procedures, code of conduct, etc. On the other hand, China may insist on including visa-easing provisions (which the EU has to organise together with the member states) and the facilitated movement of business-related persons, since this is an area where Chinese investors have particular complaints. After all, EU-China cooperation on visa facilitation is already taking shape. On 29 February 2016, the EU and China signed an agreement on the short-stay visa waiver for holders of diplomatic passports. This is seen as the first step of facilitating the movement of peoples between the EU and China. Bilateral negotiations will continue. The next step will be to widen the scope of visa facilitation and extend it to business, tourism and study abroad.²⁹⁴

15.7 Policy options for an EU-China CAI: A review

The Commission's Impact Assessment Report on EU-China Investment Relations points out five policy options (European Commission, 2013:22-23) for negotiating an EU-China CAI. Based on the controversies surrounding bilateral EU-China investment relations, as well as on the modalities of how the EU and China concluded their respective chapters on investment, we will provide our assessment of the options as follows.

²⁹⁴ Available at www.chinamission.be/eng/mh/t1344107.htm.

Table 15.1 Assessing Five Options for an EU-China FTA

Options	Impact Assessment Report
1. No agreement – continue with the status quo	The existing 26 BITs between China and the EU would remain in place as the framework for protecting investors.
<p><i>Comments:</i> ‘Do nothing’ is obviously without a basis if one regards the huge difference between the China FDI regime and that of the EU, as well as the discrepancies between the existing BITs of the member states with China. Still, companies which HAVE invested in China say that the restrictions were not in any way decisive for them. But of course, in the margin where restrictions are heavy, this cannot be true. Moreover, what the EU and Chinese businesses aspire to is a level playing field with predictability and certainty in respect of market access and protection and security. Benefits and restrictions should be applicable across the board, not to small players’ detriment and to big players’ benefit. By definition, where there are bans, the ‘no effect’ position cannot possibly be correct. The economic analysis in CGE in the report is focused solely on firms already in China – and the RIA hence loses out completely on this potential.</p>	
2. A standalone investment protection agreement	This means pursuing the highest level of investment protection possible (including labour and environment standards, CSR, SOEs and performance requirements), building essentially on member states’ best practice, for more legal certainty and consistency with EU policy objectives.
<p><i>Comments:</i> It would improve and update the separate BITs where they are old and insufficient and be harmonised at the EU level. Only Ireland does not have a BIT with China, while some member states’ BITs (such as Britain) are obviously outdated. For example, disputes are to be settled via arbitral tribunals, without detailed rules in the agreement for predictability and certainty. But even if it would be a standalone investment chapter, the question remains as to how large, or how many investment sectoral issues should be negotiated under the agreement. One should not forget that typically the scope of investment extends to the whole economy, while restricted market access is almost a “universal” challenge that EU-China bilateral trade is facing, from trade in goods, trade in services, to public procurement, IPR, etc., while China also has complaints against the investment regimes in the EU member states.</p>	
3. A separate agreement combining investment protection with market access.	A standalone investment agreement that combines option 2 with market access issues.
<p><i>Comments:</i> This is a CAI with market access issues for ‘establishment’. The question is, again, how far the market access issues for investors can be addressed, given the fact that the question encompasses a large spectrum of sectors. Or, it would be an investment agreement looking like the investment chapter under the EU-Vietnam FTA which groups trade in services, investment and e-commerce together. It was emphasised previously that China is keen for further economic reforms by engaging “external pressure”. That suggests that China would wish to group quite a few sectors into a CAI in order to expose them to “external pressure”. Therefore, it is envisaged that the “sectoral group” would be much larger than what the EU-Vietnam assembled (three subject matters). For example, public procurement is an area for which China is keen to subject its reform to external pressure (see chapter 12). The regime has already featured many improvements in recent years, though they have been restricted to technical aspects, such as a centralised e-procurement system. Reforms of public procurement have not touched on procurement laws, covered sectors and covered activities and, most important, SOEs’ monopolies in procurement activities, while these areas are exactly where the GPA is to further negotiate on and they are precisely the hurdles that EU businesses are facing – therefore, they need to be addressed in a CAI. This urgency is also valid from the EU’s perspective.</p>	

4. Integrating protection into the PCA and thus covering both market access and protection in the PCA.	An unrealistic option, given the clear gap in mandates and ambitions of the EU and China regarding both the political and the trade and investment parts of the PCA negotiations.
<i>Comments:</i> Option 4 (even in 2013!), which is to integrate a kind of option 3 in the PCA negotiations, is quickly dismissed. One should not forget that “political reforms” are taboo for the Chinese leadership. The stagnation of the PCA negotiations is a lesson for the EU, for which it should take another approach, for example dialogue, in order to engage China in “political reforms”, such as human rights.	
5. A comprehensive FTA with China including investment protection and ambitious market access for investment.	This option cannot be considered realistic, since there was, according to the Commission, no interest from China to negotiate an FTA with the EU in the near future (this probably dates back several years).
<i>Comments:</i> President Xi said the opposite on 1 April 2014 in Bruges, Belgium. When framing the options like this, it is clear that options 4 and 5 are perhaps not ‘fake’ but seen as hopelessly impractical in 2013 (when the impact assessment was published). In 2016, however, one can keep the option open to integrate the CAI in an FTA eventually. The reality check undertaken above on each side’s modality of investment negotiations within the remit of an FTA suggests that it might be possible. The proposition would become more apparent when reflecting on 1) the EU-Singapore FTA – investment protection is a standalone chapter while the subject of non-discriminatory market access to investment operation and investors is addressed in a number of chapters throughout the complete FTA; 2) the China-Australia FTA – although with a chapter on investment, negotiations on a CAI are envisaged to start in three years’ time and was launched accordingly. This shows that the question of sequence, and the EU’s stance as “CAI first, FTA later”, matters little. The question is how to settle the prevailing frictions in bilateral trade confronting businesses on both sides. For the EU, the sequence is more a question of leverage, not of functional logic of treaties.	

15.8 Integrate CAI in FTA

This section reflects on the alternative of integrating a CAI into an FTA. The policy option of integrating a CAI in an FTA is based on the following considerations. Both sides presumably realise that investment complaints exist in a few sectors, and investment restrictions imposed by China are heavy and in many sectors. On top of these restrictions is the demand for reducing needless fragmentation. For China, it implies streamlining and consolidation its vast amount of investment laws, rules and regulations (and perhaps agencies). For the EU, it implies organising relevant investment directives at EU level to achieve a harmonised investment environment across the member states. Judging from the lists of ‘non-conforming measures’ of EU member states in CETA, this is going to be quite a struggle. There is, however, one cardinal difference between the EU and China (or, indeed, with the US as well in the old picture of TTIP negotiations suspended at the end of 2016): once a Chinese (or US) investor has an ‘establishment’ in an EU member state, the national restrictions (non-conforming measures) become irrelevant, because that establishment is legally an EU firm with full national treatment, strictly enforced in the EU. This is not the case in China (nor, for that matter, in the US for the most part). Secondly, investment is a trade topic encompassing many sectors in the whole economy where, in effect, each is a key to unlocking EU-China bilateral trade potential, such as trade in goods, trade in services

and public procurement, IPR protection (including GIs), etc. This means that when negotiating a CAI, the applicability of non-discriminatory market access to these sectors would presumably attain an overarching effect also in other trade topics. Without this, the CAI would not be ambitious, and the purpose of the CAI negotiations would likely be defeated.²⁹⁵

Thirdly, the China-South Korea FTA, seen so far as the most ambitious FTA China has concluded, leaves in fact much to be desired. To begin with, the negotiations on investment market access were postponed until 2017, but they nevertheless never happened (probably as a result of the THAAD missile deployment dispute between the two countries). Indeed, what has been left out of the agreement covers most of the prevailing complaints that EU businesses are facing in China, e.g. market access (except modestly for cross-border services) and performance requirements. For “performance requirements”, China so far is only ready to comply with the TRIMs requirements, which reduces the EU’s ambition by half. With Australia, for example, China does not want to be bound by any obligations. Thus, as a precaution to the EU, a CAI alone will probably not settle EU investors’ complaints fully and completely.

Therefore, a simple question remains: What leverage does the EU have to satisfy its full demands in investment in China? China is keen to solicit “external pressure” for continued economic reforms. But, however sincere China might be, the whole exercise will only be carried out at China’s own pace and, almost certainly, not in tune with the EU’s expectations. That’s why one hears comments today such as “...in some unfortunate cases, China has taken worrying steps backwards” (Malmström, 2016). Fourthly, sequence may not matter all that much. So far, the EU insists in concluding CAI first and in negotiating FTA later when “conditions are met”, but as is perceived from China’s concluded investment negotiations, there is no guarantee that “a good outcome”, one of the two conditions set down by the EU Trade Commissioner (Malmström, 2016), will prevail after a CAI is concluded. China is not ready to embark on investment negotiations with the same vigour as the EU, given the modalities it has engaged in investment negotiations in recent years. So far, China has managed to persuade its counterparts to take a staged approach when negotiating investment, either on the subject matters of investment, from “negative listing” and national treatment to investment in the pre-establishment phase, or, on CAI as a whole, which is the case with Australia where an FTA was concluded first – and with an investment chapter – while CAI will be negotiated later. Such a staged approach is certainly not what the EU aspires to, based on its proven level of ambition in investment negotiations.

Consequently, how to prompt China to go for the same level of ambition as the EU? Presumably, this is a question of ‘leverage’, i.e. the cumbersome visa facilitation process might provide the EU with some limited leverage. This hope might be diminishing. The process of facilitating the movement of persons at the EU level has already started, as demonstrated by the bilateral agreement signed in February 2016. The roadmap of extending eased visa rules is already drawn and will eventually benefit

²⁹⁵ The purpose of negotiating an EU-China CAI is to improve market access opportunities in the EU and China by establishing a genuine right to invest and by guaranteeing both sides will not discriminate against their respective companies. See European Commission (2016).

investors and investment-related personnel. At the level of member states, in January 2016 the UK and China also announced new steps to relax visa rules (Xinhuanet, 2016). Other member states might follow suit. This means that the “movement of persons” is less likely to serve as powerful leverage for the EU in its CAI negotiations with China. So, what does the EU have left as possibly powerful leverage? The answer is: the FTA. And this implies integrating CAI in FTA.

When CAI is integrated into FTA, the issue of market access, together with national treatment, in investment – at both pre- and post-establishment phases encompassing a vast area of trade topics – can be ironed out in its entirety since many subjects fall under both headings of CAI and FTA. There is a clear overlap and chapters are interrelated. Commitments that the EU is determined to press ahead on with China under a CAI could be more effectively tackled in a much broader context. In any case, only an FTA seems capable of accommodating a deep and comprehensive investment agreement. China might be forthcoming in trade negotiations, but it is “depth and scope” that matters most to the EU. Hence, powerful leverage to be used by the EU is the FTA. Having said that, some might be concerned about unpredictability underlined in an EU FTA due to ratification procedures in the member states, such as what happened in the Wallonia Parliament vis-à-vis the EU-Singapore FTA. But, following the Opinion issued by the CJEU in May 2017, in which case it is confirmed that the EU has exclusive competences to realise almost all (except portfolio investment and ISDS mechanism) its broad trade-related objectives in ‘EU-only’ FTAs, the political case which may surface when merging FTA and CAI has become much weaker, if not unwise.²⁹⁶ However, there is one counterargument. In China, there is considerable resistance to opening up both to trade (especially in services) and FDI. Thus, integrating a CAI in the FTA might de facto, even when not intended at first, lead to long delays before market access for investors would finally be realised. This might be regarded as a plea for the Canadian-Chinese approach (FIPA) where a stand-alone approach seemed to have worked.

²⁹⁶ See G. Van der Loo, “The Court’s Opinion on the EU-Singapore FTA: Throwing off the shackles of mixity?”, CEPS Policy Insights, CEPS, Brussels, May 2017.

PART III. POTENTIAL ECONOMIC IMPACT: A CGE-BASED SIMULATION OF EFFECTS OF THE FTA

16. Introduction

Part III of the study provides estimates on the potential economic impact of a China/EU FTA on the EU, EU member states and China. The identification of the key economic impacts of this FTA will be made under the general assumptions of the economic modelling, as well as two scenarios about the design of a potential FTA: modest and ambitious. The two FTA scenarios are based on a shift to bilateral trade under zero tariffs (as an FTA suggests, of course) and a fairly detailed scrutiny of the trade costs for companies under the common label of NTMs, that is, non-tariff measures, mainly regulatory barriers of many kinds. The costs of NTMs for market access are expressed as a percentage of the invoice price called AVE (ad valorem equivalent). Thus an AVE of 25% implies that the costs for exporters to access the partner's market is 25% higher due to NTMs.

While there has been significant progress in lowering tariff barriers to international trade and enlarging or removing tariff-rate quotas,²⁹⁷ the policy relevance of non-tariff measures (NTMs) has increased. There are three reasons why greater attention is being paid to NTMs. First, as the level of tariffs has decreased over time, the relative importance of NTMs has increased. In addition, during this time, significant progress has been made in terms of quantifying the effects of NTMs, leading to a better understanding of the costs these barriers impose on effectively entering foreign markets. And finally, there is some evidence of NTMs being used as a substitute for the tariffs that have been reduced through progressive multilateral and bilateral negotiations. As chapters 9 and 10 (on TBTs and SPS measures between China and the EU) and chapter 12 (public procurement) show for goods and chapters 11 (services), 13 and 14 (on IPRs and GIs, resp. on SOEs and their distortive effects) demonstrate for services-related NTMs, and given the relatively low tariffs between the EU and China, NTMs have become the core of modern FTAs. It is no different for a China/EU FTA. In addition, there is close interdependence between the CAI, discussed in chapter 15 on investment, and effective market access for EU and Chinese service providers, respectively.

However, while this study highlights NTM-related trade costs, tariffs can actually prove strategically important as well. This means that, as tariffs are easier to negotiate

²⁹⁷ See chapter 8 for the relevance of tariff-rate quotas (TRQs) in bilateral agro-food trade.

and to implement than NTM reductions, there may be scope for gains even from a tariffs-only FTA. At the same time, the variation in protection across sectors, which itself reflects political sensitivity, means that expected effects on a sector level may well be just as sensitive.

Part III is organised as follows: chapter 17 provides an overview of trade and production linkages between China and the EU. This includes value added elements of trade (e.g. in *Global Value Chains*, see also chapter 4), and the importance of mass consumer goods. Chapter 18 then provides an overview of the trade policy landscape including tariff and non-tariff trade costs and the scope for their reduction. We provide model-based assessments of the effects of an FTA in chapter 19 under the two FTAs. Annexes 3, 4 and 5 summarise methodological issues and include some tables underlying the graphs that follow.

17. Trade and production linkages

The focus here will be on two aspects: value-added trade, for which it is possible to make a direct linkage with production and with jobs, and mass-consumer goods.

17.1 Value added and trade linkages between China and EU

Before examining the implications of an FTA between the EU and China, the focus is first on the structure of the existing trade relationship. For this purpose, Table 17.1 presents the composition of trade on what is known as a “value-added basis” (see chapter 4).

Chapters 2 and 3 described the trends in bilateral trade and foreign direct investment (FDI). GVCs were discussed briefly in chapter 4, as they are so important in the case of EU-China, showing bilateral goods trade in value-added form. One observes that the bilateral deficit with China in goods is lower in value-added terms than in terms of conventional trade statistics. There is also a brief summary of the jobs connected to bilateral (value-added) trade in the member states and in China. A further elaboration of bilateral value-added trade is presented below.

Conceptually, “value-added trade” means measuring the EU activity content of trade (employment, etc.) contained in EU exports to China, and vice versa. The technical methodology is explained in annex IV. In Table 17.1, the value added, for example, contained in German exports to China is presented. From column A, this was \$62.2 billion in 2011, including both direct activities (German machinery workers engaged in production for exports to China) and indirect activities (e.g. German service workers that supply services used in producing German machinery for export to China). Across EU member states, Germany has the strongest linkages in terms of German economic activity supporting exports to China – \$62.2 billion. A second tier includes France at \$17.2 billion, the UK at \$11.8 billion, and France at \$17.2 billion. In other words, Germany’s value added contained in exports to China are three to five times greater than this second tier of countries.

A third tier of value added contained in exports to China of between \$2.5 billion and \$10 billion includes in descending order: Spain, Sweden, Finland, Belgium, the Netherlands, Denmark, Austria and Ireland. Basically, the largest EU economies have the greatest connections in terms of domestic value added exported to China, with Germany carrying a particularly large share.

Column B presents “value-added trade” in terms of China’s exports. Again, it is clear that Germany is the most important single partner in the EU, accounting for \$78.1 billion of Chinese production linked to exports. France is the second most important destination, with \$46.2 billion in Chinese exports on a value-added basis. One may note that, in terms of China’s exports on a value-added basis, France, Italy and the UK are relatively more important in column B than in column A. In other words, while Germany clearly dominates the offensive interests of the EU on a value-added basis, for China the importance of individual EU member states is somewhat more balanced.

Columns C and D present a different view, that is, gross exports, including imported value added. Hence, while China exported \$101.5 billion to Germany on a value-added basis (from column D), only \$78.1 billion actually represents value added from China (from Column B), rather than imported parts and components from third countries (the difference between columns D and B).

Table 17.1 EU China trade by member state, 2011 (\$ million)

	Value-added trade		Gross trade	
	A: EU to CHN	B: CHN to EU	C: EU to CHN	D: CHN to EU
Austria	2,991.6	4,246.6	5,095.9	5,498.5
Belgium	3,622.7	15,705.9	9,244.1	20,314.6
Cyprus	39.6	843.9	70.5	1,100.5
Czech Republic	917.2	8,119.3	1,791.4	11,205.9
Denmark	2,831.1	5,519.5	4,332.8	6,970.7
Estonia	56.1	935.4	133.4	1,230.8
Finland	4,022.2	3,448.5	6,224.1	4,448.5
France	17,225.0	46,231.6	25,864.3	60,092.2
Germany	62,230.3	78,108.2	93,477.9	101,545.6
Greece	498.2	3,970.7	691.4	5,120.8
Hungary	997.4	4,878.4	2,383.1	6,784.9
Ireland	2,554.9	5,140.8	4,277.6	6,059.3
Italy	11,651.5	31,929.4	16,194.9	41,241.8
Latvia	59.8	630.4	104.7	817.8
Lithuania	86.4	790.7	129.4	1,024.6
Luxembourg	285.3	424.6	771.8	527.7
Malta	680.5	1,586.6	876.7	2,047.1
Netherlands	3,262.3	14,493.0	4,815.3	18,475.7
Poland	1,262.9	9,410.2	2,004.4	12,381.8
Portugal	917.8	2,540.5	1,450.0	3,215.0
Slovakia	1,095.1	2,372.6	3,215.0	3,166.9
Slovenia	103.7	1,330.1	193.7	1,729.9
Spain	6,786.8	19,744.4	9,418.9	24,987.6
Sweden	5,561.1	7,166.3	8,226.8	9,062.4
United Kingdom	11,863.8	42,040.9	17,746.2	53,854.2
Bulgaria	209.4	824.2	452.9	1,073.5
Croatia	82.9	1,313.8	132.5	1,635.5
Romania	485.3	2,888.3	700.4	3,892.8

Source: Own calculations from GTAP9.

Table 17.2 presents an alternative viewpoint, based on sectors. Here, for the EU as a whole, the table presents a breakdown on trade in value added with China on a sector basis. Note that two concepts of value-added trade are presented here. The first, *forward linkages*, captures the extent to which output in one sector is sold downstream to other sectors for further processing before final export. For example, from column A, \$28.4

billion in business and ICT services were included in exports to China. However, in terms of gross value of exports (column E), the EU exported only \$7.5 billion in business and ICT services to China, the direct cross-border trade in these services (mode 1). The difference reflects the extent to which machinery, vehicles, chemicals, etc., all contain EU business and ICT services as inputs, incorporated in their invoice prices (hence the indirect EU export of services).

The second concept on a sector level is *backward linkages*. This measures the extent to which final exports (for example, motor vehicles) contain not only value added solely from motor vehicles, but also embody inputs from upstream, where these also require EU labour and capital. For example, as shown in column C, motor vehicle sector exports from the EU to China included \$20.4 billion in EU value added. In comparing the values in columns A and C, it is clear that motor vehicles are not important for the sector itself. In fact, a large share of the value added in motor vehicle exports is from upstream sectors (services, metals, etc.). In contrast, with business and ICT services, the importance of trade with China is primarily in terms of downstream manufacturing firms who use business and ICT services as inputs (when comparing columns A and C).

Table 17.2 EU and China trade linkages in 32 sectors

	Forward linkages		Backward linkages		Gross exports	
	A: EU to CHN	B: CHN to EU	C: EU to CHN	D: CHN to EU	E: EU to CHN	F: CHN to EU
Primary agriculture	1,613	26,434	1,283	2,635	1,640.8	2,757.3
Forestry	590	4,487	319	62	371.6	65.7
Fishing	56	1,790	38	39	49.9	42.0
Oil and gas	457	3,123	3	0	3.8	0.3
Other energy, mining	1,536	9,873	1,758	811	2,513.9	983.2
Utilities	2,873	7,813	64	218	82.2	259.5
Construction	2,248	826	1,355	1,639	1,769.9	1,977.5
Wood, pulp, paper	937	5,023	1,004	10,369	1,381.2	12,649.3
Mineral products	1,307	5,613	954	5,507	1,307.3	6,833.2
Primary metals	5,508	16,127	8,053	7,017	14,195.5	9,756.8
Fabricated metal prod.	5,966	7,288	3,070	11,625	4,365.1	15,090.7
Other machinery	30,537	26,891	46,482	55,689	69,333.4	74,812.2
Electrical machinery	3,158	26,815	4,674	64,390	7,582.6	93,311.7
Motor vehicles	10,197	2,709	20,386	3,528	37,105.3	4,802.8
Other transport	2,881	3,329	5,551	7,290	9,938.6	9,554.6
Other goods	793	14,820	887	23,377	1,517.0	27,208.9
Processed foods	1,514	3,661	1,853	4,695	2,567.3	5,405.0
Beverages and tobacco	906	1,550	1,573	93	2,044.2	107.1
Textiles	1,052	14,659	1,448	17,928	2,211.5	21,997.8
Apparel	355	8,964	626	30,131	906.9	36,434.9
Leather products	595	5,150	961	15,710	1,363.3	18,630.3
Paper products, printing	3,555	4,102	3,489	2,601	4,484.2	3,238.7
Petrochemicals	343	1,150	81	960	489.2	2,092.2
Chem., rubber, plastics	11,081	24,791	15,963	21,730	25,826.6	28,421.0

Wholesale, retail	6,880	22,511	7,458	6,802	10,130.6	7,284.1
Air transport	500	1,450	730	2,467	1,628.2	3,288.8
Land transport, other	4,191	11,920	1,501	3,121	2,446.7	3,633.6
Maritime transport	127	7,904	172	7,103	353.1	8,723.9
Recreational, other services	1,697	3,777	624	1,120	718.3	1,245.1
Communications	2,497	4,584	506	599	596.7	662.4
Finance	3,616	15,402	152	275	227.4	284.8
Insurance	1,520	1,180	2,108	464	2,776.5	518.5
Business, ICT services	28,415	15,625	6,768	5,145	7,544.6	5,818.2
Public services	2,877	5,295	488	1,494	546.5	1,614.3

Source: Authors' own calculations.

17.2 Trade in mass consumer goods

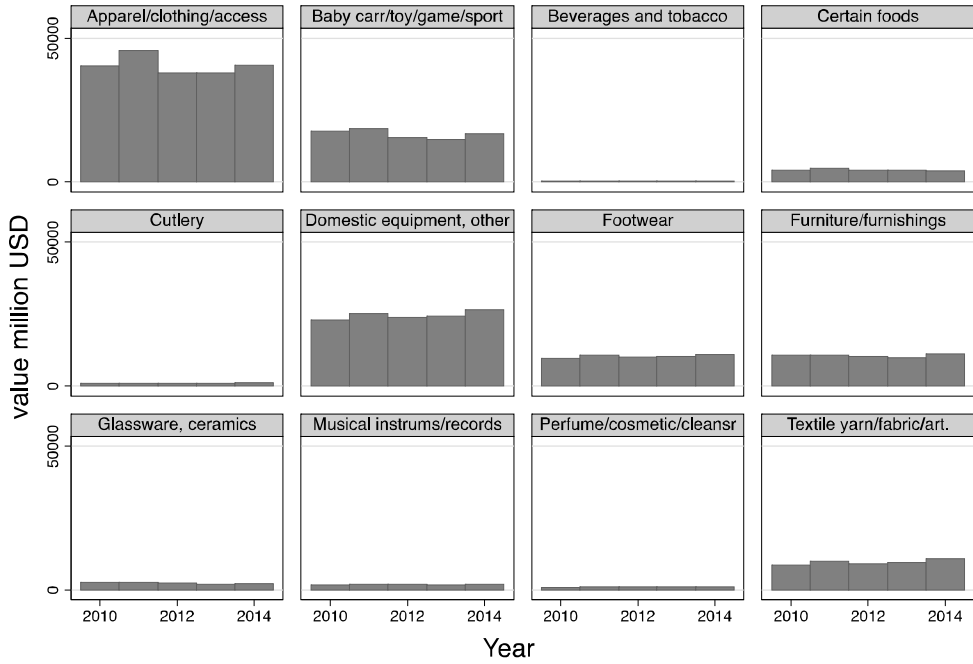
A good deal of EU imports from China is traditionally found in mass consumer goods.²⁹⁸ In particular for consumers and retailers, imports from China have been a boon with large volumes at very competitive prices. Figure 17.1 plots recent EU imports from China of these products in value terms. These goods were worth \$127.4 billion in 2014. The most important category is apparel and accessories (\$40.5 billion in 2014) followed by domestic equipment (\$26.7 billion in 2014) and baby goods, toys, and sports equipment (\$16.9 billion in 2014).

In the other direction (EU to China), exports are far lower but growing. EU exports stood at \$15.5 billion in 2014 for these goods, up from \$8.6 billion in 2010, or 80% in four years. This is shown in Figure 17.2. The most important category here is domestic equipment (\$2.8 billion), followed by beverages and tobacco (\$2.1 billion), certain foods (\$2.0 billion) and apparel (\$1.8 billion). There has also been rapid growth in perfumes and cosmetics, from \$0.9 billion in 2010 to \$1.6 billion in 2014, an increase of 77.9% in only four years.

What is clear from the underlying values in Figure 17.1 and Figure 17.2 is that there is a particularly strong asymmetry in the trade balance in mass consumer goods. While China exported \$127.4 billion to the EU in this set of goods in 2014, EU exports to China amounted to \$15.5 billion. At the same time though, EU exports have grown relatively rapidly in this category in recent years, while Chinese exports to the EU have been more or less flat over the same period.

²⁹⁸ Mass consumer goods are defined as apparel and accessories; baby goods, toys, and sports equipment; beverages and tobacco; certain foods (meats, fish, and rice); cutlery, domestic equipment (white goods, gardening equipment, other household goods); leather and footwear; household furniture and related furnishings; glassware and ceramics; musical instruments; perfumes and cosmetics; and textiles and fabrics.

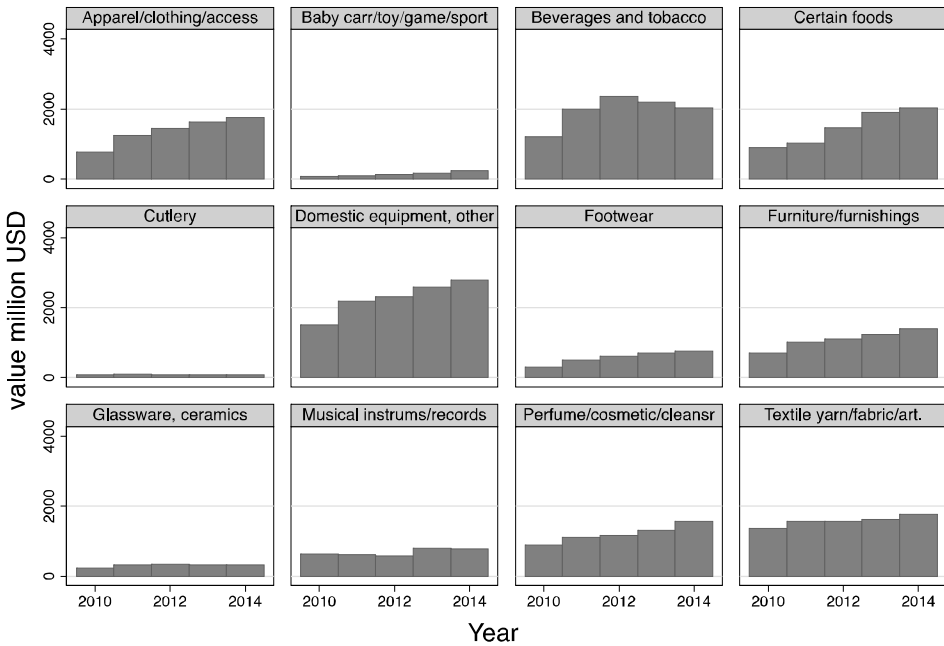
Figure 17.1 EU 2014 imports of mass consumer goods from China (\$ million)



Authors' own elaboration using WITS (UNCTAD) trade data, mapped to ISIC3 categories.

Source:

Figure 17.2 EU 2014 exports of mass consumer goods to China (\$ million)



Source: Authors' own elaboration using WITS (UNCTAD) trade data, mapped to ISIC3 categories.

18. Removing tariffs and reducing NTM costs in a China-EU FTA

What are the trade-related implications of an FTA between the EU and China? This involves a range of changes to policy instruments, including both tariffs and non-tariff measures. Table 18.1 presents current applied tariffs at the sectoral level between the EU and China. The information is essentially the same as in chapter 6, where an extensive tariff analysis has been conducted at two-digit as well as six-digit and, where relevant, eight-digit levels. Because Table 18.1 is a direct input for the model calculations in chapter 19, sectors have been arranged slightly differently (namely, according to the GTAP classification (used for model input) than in chapter 6. While the average tariff for the EU as a whole is roughly 2.7%, for goods from China the average is 4%. The reason is that China's exports to the EU are more concentrated in sensitive sectors that carry higher tariffs. This includes, for example, textiles and clothing, with tariffs of 9.2% and 11%, as well as leather goods with a tariff of 10.7%.

In the case of China, the average tariff applied to EU goods is 6.9%. High rates include ceramics and glassware (aka non-metallic mineral products) at 10.2%, motor vehicles at 12.8%, other (primarily consumer) goods at 12.6%, beverages and tobacco at 11.7%, textiles at 8.6%, and apparel at 15.6%. In both the EU and China, primary agriculture is protected with tariffs roughly 50% higher than the average of all tariffs. Table 18.1 presents a set of relatively aggregate sectors. The TRQs (see chapter 8) are also relevant in some agro-food sectors, but they are incorporated in the AVEs employed in the simulation. This means that, while the AVE impact of agricultural protection (including TRQs) is included in the estimated AVEs for applied tariff regimes in both countries, the simulation is done with baseline protection in terms of the trade-weighted AVEs for these aggregate sectors (i.e. no explicit modelling of TRQs).²⁹⁹

In addition to tariffs, both the EU and China face trade costs linked to non-tariff measures. Some of these are 'actionable', meaning they lead to trade costs that can be reduced in the FTA through a mix of negotiation on cross-border liberalisation and harmonisation of regulations, instruments and procedures. Others are not, possibly due to the great sensitivity of specific domestic regulatory objectives, or to the gaps between or misalignment of domestic regulatory objectives of FTA partners. Based on an assessment of actionability levels (Ecorys, 2009) and econometric estimates of overall trade costs (see Annex IV and Table A-7 of Annex V to this report), Table 18.2 below provides a summary of the estimates of 'actionable NTMs' for China and the EU for goods. These are expressed as trade costs, known as ad valorem equivalents (AVEs). They represent the percent increase in delivered price because of underlying NTMs.

²⁹⁹ See the documentation on the integration of the ITC/CEPII MacMAPS database in GTAP on this point in Guimbar, Jean & Mimouni (2012).

Table 18.1 Applied tariffs between the EU and China

	CHN tariffs on EU	EU tariffs on CHN	EU exports to CHN (\$ mil)	CHN exports to EU (\$ mil)
Primary agriculture	9.4	6.0	1,640.8	2,757.3
Forestry	1.3	0.9	371.6	65.7
Fishing	4.7	0.9	49.9	42.0
Oil and gas	0.1	0.0	3.8	0.3
Other primary energy, mining	1.1	0.0	2,513.9	983.2
Wood, pulp, paper	1.8	1.2	1,381.2	12,649.3
Non-metallic mineral products	10.2	5.1	1,307.3	6,833.2
Primary metals	1.8	2.5	14,195.5	9,756.8
Fabricated metal products	8.6	2.9	4,365.1	15,090.7
Other machinery	5.9	2.2	69,333.4	74,812.2
Electrical machinery	2.3	1.0	7,582.6	93,311.7
Motor vehicles	12.8	5.1	37,105.3	4,802.8
Other transport	3.6	3.3	9,938.6	9,554.6
Other goods	12.6	2.2	1,517.0	27,208.9
Processed foods	12.5	13.7	2,567.3	5,405.0
Beverages and tobacco	11.7	7.0	2,044.2	107.1
Textiles	8.6	9.2	2,211.5	21,997.8
Apparel	15.6	11.0	906.9	36,434.9
Leather products	9.1	10.7	1,363.3	18,630.3
Paper products, printing	2.4	0.1	4,484.2	3,238.7
Petrochemicals	3.4	0.3	489.2	2,092.2
Chemicals, rubber, plastics	6.2	4.3	25,826.6	28,421.0
Average	6.9	4.0		

Source: WITS (WTO and UNCTAD) tariff data, mapped to GTAP9 trade data.

In Table 18.2, NTM estimates for services are also reported. These come from recent World Bank estimates of AVEs linked to discriminatory trade policies, i.e. since they are only the discriminatory ones, all are fully actionable trade costs for services. For the reader, it should once again be stressed that the AVEs in Table 18.2 therefore do not include all trade costs of NTMs in services between the EU and China, but only the part (in percentage of the invoice price) that can be removed in the FTA. From WTO experience in GATS and, even more prominently, from the EU experience in the internal market, it is well-known that non-discriminatory NTMs can also be a severe hindrance when accessing foreign markets. As an illustration, the famous Cassis-de-Dijon ruling of the EU Court of Justice (CJEU) of 1979, introducing mutual recognition based on free movement, was based on a non-discriminatory restriction by Germany, boiling down

to an import ban. Similar CJEU case law was later applied to services. Therefore, the focus on discriminatory services regulation (in World Bank data) will necessarily lead to a considerable *underestimate* of services restrictions hindering bilateral China-EU trade.

Table 18.2 Estimated actionable NTBs, expressed as AVEs (*ad valorem equivalents*)

	CHN AVEs on EU	EU AVEs on CHN	EU exports to CHN (\$ mil)	CHN exports to EU (\$ millions)
primary agriculture	38.5	42.4	1,640.8	2,757.3
forestry	38.5	42.4	371.6	65.7
fishing	38.5	42.4	49.9	42.0
oil and gas	0.0	0.0	3.8	0.3
other primary energy, mining	0.0	0.0	2,513.9	983.2
utilities	16.0	7.7	82.2	259.5
construction	16.0	7.7	1,769.9	1,977.5
wood, pulp, paper	5.1	13.6	1,381.2	12,649.3
non-metallic mineral products	4.5	11.7	1,307.3	6,833.2
primary metals	9.1	11.5	14,195.5	9,756.8
fabricated metal products	9.1	11.5	4,365.1	15,090.7
other machinery	8.3	4.6	69,333.4	74,812.2
electrical machinery	12.8	7.1	7,582.6	93,311.7
motor vehicles	63.8	38.9	37,105.3	4,802.8
other transport	8.8	4.9	9,938.6	9,554.6
other goods	18.4	25.5	1,517.0	27,208.9
processed foods	17.0	15.6	2,567.3	5,405.0
beverages and tobacco	139.4	92.3	2,044.2	107.1
textiles	14.5	20.1	2,211.5	21,997.8
apparel	14.5	20.1	906.9	36,434.9
leather products	14.5	20.1	1,363.3	18,630.3
paper products, printing	16.8	23.2	4,484.2	3,238.7
petrochemicals	33.0	34.3	489.2	2,092.2
chemicals, rubber, plastics	15.8	17.8	25,826.6	28,421.0
wholesale, retail	6.0	1.4	10,130.6	7,284.1
air transport	68.0	15.8	1,628.2	3,288.8
land transport, other	0.0	24.5	2,446.7	3,633.6
maritime transport	53.0	7.8	353.1	8,723.9
recreational, other services	16.0	7.7	718.3	1,245.1
communications	7.5	2.1	596.7	662.4

finance	22.0	1.8	227.4	284.8
insurance	21.0	11.0	2,776.5	518.5
business, ICT services	39.3	19.7	7,544.6	5,818.2
public services	--	--	546.5	1,614.3
total trade-weighted	22.3	12.9		
goods	22.5	13.1		
services	21.0	10.8		

Note: Services AVEs are from the World Bank (Jafari & Tarr, 2015). Estimates for goods are discussed in the Appendix. Actionability rates for goods are from ECORYS (2009) and are applied to overall estimated trade costs. Note that liberalisation in public services is not explicitly modelled.

Sources: Authors' estimates (see annex and text) based on World Bank and EUROSTAT data.

On a trade-weighted basis, China's 'actionable' AVEs against the EU (average of 22.3%) are considerably higher than the EU's 'actionable' AVEs against China (average of 12.9%). Referring to annex IV, which provides estimates of the *full* costs of NTMs in bilateral trade in goods and services, this divergence between the EU and China is not surprising. Ignoring the trade involved (hence, simple averages, not trade-weighted), the full NTM costs or AVEs encountered for goods entering China is no less than 37.6% (not all actionable) and 'only' 22.8% for goods accessing the EU. For services, mode 1 trade from the EU to China would encounter 43.5% whereas Chinese services accessing the EU encounter 'only' 20.9%. However, because goods exports from the EU to China are concentrated in relatively few sectors with full NTM costs much lower than the simple average of 37.6%, whilst EU exports in two very high NTM cost sectors (agro/fishing and beverages) are small, it is still possible to arrive at lower trade-weighted averages. Once services are included, the average trade-weighted full NTM costs are 25.7% and 22.3% for actionable NTMs. For EU exports of services to China, NTM costs per unit of services are mostly high, but roughly half of the services export value (mode 1) is in wholesale/retail (with a NTM cost of 12%) and land or other transport without any (known) NTM cost, which helps to push the weighted average down. For Chinese services exports to the EU, the obverse happens: they encounter a (simple) average of full NTM costs of 20.9%, but this is pushed up slightly (to 26.3% for trade-weighted) due to three sectors with much higher NTM full costs. For actionable NTM costs this is, in turn, cut by half to a trade-weighted 12.9%.

The estimates of the potential reduction of the costs of NTMs in bilateral EU-China trade in goods and services, as derived here, will be used in chapter 19 to estimate the economic impact of the FTA. Note that China has substantially higher relative NTM levels for motor vehicles and services, while the EU has relatively higher NTM levels in low-wage sectors like textiles, clothing and footwear, paper and metals.

Box 18.1 alerts the reader to some of the problems involved with NTM calculations. The latter are notoriously difficult due to a host of reasons. The AVE estimates that do exist may differ in sectors and/or between countries and such differences can, at times, be worryingly large. This reflects an uncomfortable dilemma, namely, that lengthy qualitative descriptions of NTMs or regulatory barriers (cf. chapters 9-14) in trade (chapter 15) or investment often leaves the reader bewildered

about the overall significance of ‘reducing the costs of regulatory barriers’, while at the same time, the state-of-the-art quantification efforts of AVEs have surely made progress but do not yet represent a very reliable alternative.

Box 18.1 AVEs: What it takes to obtain them and lingering problems

When regulations of the two FTA partners differ, there will be extra costs to exporting firms trying to meet the regulatory requirement of the importing country. Expressed in a percentage of the delivery price, these costs are called AVEs (ad valorem equivalents, like a tariff). There are many reasons why estimated AVEs differ, and occasionally differ a lot. One is the database. Recent databases of the WTO, OECD and World Bank are far richer and more detailed than old ones: more countries and sectors and a much finer registration of the restrictions applies. One example: older databases (such as TRAINS from the WTO) often used ‘binary’ (i.e. zero or one) listing of restrictions, which risks leading to overestimates, whereas nowadays numerous details can be included both for goods (typically TBTs and SPS) and services. That means that there are many cases with intermediate levels of restrictions between zero (no cost for access) and one (imports blocked). For services, the recent STRIs from the World Bank and the OECD (see Figures 11.1 and 11.2), with distinct methodologies, represent a major improvement. However, as noted in section 11.2, even these great efforts in obtaining ‘good’ STRIs have not yet generated fully reliable estimates of the restrictiveness for market access, as has been exemplified with telecoms and transport.

Another set of reasons is found in the methodologies, which may go too far here (gravity versus regulatory restrictiveness indices, which have to be converted into AVEs; both have their problems). A third set of reasons is directly a result of various inevitable simplifications, such as choosing (somewhat arbitrary) ‘weights’ in STRIs or (as in Fontagne et al., 2013) choosing a benchmark country for the ‘free market access’ case (which is intrinsically problematic as risk regulation usually has justifications, such as health, safety and environment, which cannot be pursued without regulation nor, thus, without costs). Yet another reason consists in a database with solely non-discriminatory restrictions (e.g. World Bank STRIs) as against a set comprising any regulation imposing costs on would-be imports. Finally, so-called ‘actionability’ of NTMs (that is, what part of bilateral NTM costs can be removed in an FTA) is extremely hard to ‘guesstimate’ as well.

For the present empirical simulation of a China/EU FTA, two methods of estimating the AVEs first have been combined: for goods, a separate gravity analysis was undertaken (see Annex IV), and for services, the AVEs are taken from Jafari & Tarr (2015) (based on the database underlying the World Bank’s STRIs), the most advanced contribution on AVEs for services at the moment, yet it also shows that one has to be cautious in reading too much into these estimates. As will be clear from chapter 19, the contribution from bilateral cross-border liberalisation of services to the economic gains of the FTA remains quite modest – this has also been found in, e.g. the CEPR (2013) study on TTIP. But services is a cardinal problem in an EU-China FTA and it seems remarkable that its supposed resolution would not bring much in terms of economic gains. Inspecting what could be reasons for this quickly leads one to the AVE issues. The attraction of the new STRIs, here from the World Bank, is that the underlying database is sophisticated and exceptionally detailed (a questionnaire of no fewer than 169 pages for 11 services sectors, for 103 countries, filled in mainly by local law firms; in contrast to the early ECORYS (2009) panel of experts which

were largely from business itself and only referred to the US and the EU; supplementary information from selected country studies).

Moreover, the World Bank STRIs do incorporate the EU as a preferential regime (unlike the OECD STRIs). But Jafari & Tarr base their study to a considerable extent on work on services restrictions for the Australian Productivity Commission (Findlay & Warren, 2000). Despite some technical advantages, this leads to a series of queries such as somewhat arbitrary weights, coefficients based on services trade of selected countries in the late 1990s, no inclusion of (road) transport and telecoms (two key sectors), differences in the restrictions identified in the new STRIs and those found by Findley & Warren, etc. Moreover, there is the general problem of focusing on mode 1 only, thereby neglecting the most prominent mode to supply services, certainly for the EU in China, namely FDI (mode 3). In addition, there are complementarities between goods and services, and FDI in services (in China) may thus also magnify (EU) exports of goods and services.

With the help of Berden & Francois (2015), some examples of AVEs can be provided for the EU for sectors where AVE results differ greatly, as well as some examples where different studies show similar results. Telecoms (also a problem in Figures 11.1 and 11.2) is a typical example of the seeming difficulty of verifying AVEs: 11.7% (Ecorys), 38.6% (Fontagne) and 1.1% (Egger et al., 2015); another one is financial services or banking only, with 11.3% (Ecorys), 51.2% (Fontagne) and 1.5% (Egger et al (2015)); yet another case is other business services/professional, with 14.9% (Ecorys), 32.6% (Fontagne) and 35.4% (Egger). Sectors with similar AVEs for the EU include chemicals (21%, Ecorys; 19%, Egger) and agro-food (48.2%, Fontagne; 48.4%, Egger). Problems also arise in, e.g. electrical machinery, with 6.5% (Ecorys) and 19.4% (Egger), but a large segment of it (office and ICT equipment) has an AVE of 22.9% (Ecorys).

Coming up with AVEs for China is harder still. First, almost no prior empirical work was done on China until very recently. Second, as is clear from chapters 11 (services) and 15 (investment), and to some extent from chapter 9 (TBTs), it is far from easy to trace all the laws and regulations, including local and provincial variations. There is also a wide degree of discretion which renders it difficult to attribute the proper scores for restrictiveness. The actionable AVEs in Table 18.2 are not yet very refined. For example, primary agriculture, forestry and fishing all have actionable AVEs for China of 38.5%; the same is true for three key sectors for China, namely, textiles, apparel and leather products. The reason is that the GTAP database does not use the same sector aggregation as the HS (two-digit) system. Thus, the sectors listed in Table 18.2 are not fully identical with HS two-digit sectors (e.g. 'other machinery' does not fully overlap with HS 84, or 'various machinery'), where the EU has a large intra-sectoral surplus. In any event, the trade-weighted actionable AVEs for China, for goods and services together, seem plausible: an AVE for China of 22.3% as against 12.9% for the EU. Though crude, this would appear to be consistent with the wealth of qualitative information in Part II of the study.

19. Modelling the FTA between China and the EU

19.1 A non-technical introduction of the model simulations

Following the empirical and analytical information in previous chapters, in particular chapter 18 on the main market access barriers (tariffs and – actionable – NTMs, and their costs), the present chapter attempts to simulate the economic impact of two FTA scenarios of a China/EU FTA. The simulations are done with the help of a sophisticated model, encompassing many sectors and even more countries (including some outside the EU) and also incorporating markets other than product or services markets directly relevant for trade (e.g. the labour market, with workers with distinct skill levels). Using such a very ambitious and complex model has the enormous advantage that the direct trade effects are not the only aspect that is studied. And rightly so. Because such effects on EU or Chinese exports in turn cause a range of other (so-called ‘secondary’) effects, due to demand (from that export sector) for extra material, extra services, extra workers, etc., which, in turn, may induce yet other effects, perhaps even on imports of inputs as well. The same goes for imports: if bilateral imports from China, resp. from the EU, increase due to the FTA, this might reduce the demand of domestic substitute products or services whilst at the same time affecting consumption patterns, and possibly even consumptive demand (if these imports are cheaper than what was consumed before, disposable income is higher for any given quantity purchased). This might also impact on the labour market or segments of it. Such models on the overall economy, even if very stylised, are extremely demanding technically and in terms of data. Therefore, for the sake of being capable of calculating impacts of an FTA, some simplifying assumptions are inevitable.

One such major simplification is that the economy, as modelled, will return to ‘general equilibrium’ (such that markets ‘clear’ via price and quantity adjustments). Hence, the name of this family of simulation models, namely, CGE or ‘computable general equilibrium’ models. This implies not only that goods and services markets clear but also the labour market. For convenience – given the tremendous complexity of the exercise – CGE models usually fix the level of employment. That ‘given’ employment in the economy excludes a priori that the FTA would generate *additional* unemployment (job losses) in the calculations. Labour (within that given total of jobs) may reallocate between sectors in response to wage changes, both up and down. Wages would be under pressure in (EU) sectors where less will be demanded due to, say, Chinese imports in the EU or a reduction of exports to China, or the secondary effects of these first effects. Alternatively, wages in some sectors would rise if the opening up of China would induce additional exports, or if secondary effects induce greater demand for the output of that sector. Given the sectoral wages rising (or falling), labour would reallocate (in the margin) towards (or out of) the sector. These reallocations show clearly that CGE models are long-run models where such effects can slowly work themselves out and the costs of labour reallocation over time matter much less. Indeed, in reality, labour markets do not easily clear in the short run (and this is often painful), but labour reallocation over the medium to long run generally works well in market economies. Meanwhile, the costs of adjustment are cushioned by the welfare state in the

short run and by targeted 'active' labour market policies (such as upskilling) in the medium run. This is further refined when – as the simulation will do – three skill levels are distinguished.

As chapter 17 already showed that secondary effects of an immediate increase in exports induce effects along the value chains (both intermediate goods inputs and services inputs) which are incorporated in the overall effects. This generates incredible complexities that could simply not be understood without such comprehensive models. This advantage of making a proxy of the entire economy (be it stylised) and its numerous interactions also implies that the first-order effects of an FTA (say, the immediate increase in a sector's exports) are not at all an accurate description of the expected impact of an FTA. Although one cannot always be sure, usually the overall economic impact (when all interactions have worked themselves out) tend to be two to three times the magnitude of the first-order effect, which is not found or known with a partial model or from simple business surveys (where business will only register the immediate import/export effects for its own activity). One can thus find that a sector might fear a small decline in its activity as a result of concluding an FTA (with China) whereas the CGE model – incorporating all secondary and tertiary effects and interactions, perhaps including an overall increase in activity in the economy – may well show that the end result is a net positive outcome for the output of the sector (though not necessarily for its own exports).

Models have limitations, and this is no different in the case of CGE. It is good to be conscious of what these limitations are, but it is not appropriate to criticise models because they abstract from 'reality'. That is their very function and is inherent to them, because the purpose is to comprehend in a stylised way what otherwise would remain vague or incomprehensible or at least poorly understood. Sound analytical models can also pre-empt or expose assertive 'framing' which has little or no analytical basis. The CGE model used here is an advanced one. Note that it is not only the model itself which is so comprehensive, so is the GTAP-9 database on which the exercise relies. The GTAP database is a most formidable one and probably second-to-none in the world, whether in terms of the number of sectors, countries inside and outside the EU (110), value-chain interactions (input-output relations) or otherwise. Of course, one can employ alternative approaches. However, it is hard to identify suitable alternatives if policy-makers and/or business or consumers want to acquire a rich menu of effects on all levels, including for sectors (be they goods or services) and/or for the labour market (and their skill levels) and all this for each EU member state and some third countries.

It is also important to realise what *cannot* be expected from a CGE exercise. The temporary job losses (if any) in a particular sector and/or the overall effect on (un)employment can only be approximated in an interpretative fashion. In the present study, the closest one gets to this result is to regard the inter-sectoral reallocation of workers (at distinct skill levels) as the temporary (un)employment effects, if – unlike the model – the wage adjustment (especially downward) does not work. However, if one would interpret labour movements out of a sector as temporary unemployment, it should not be forgotten that such reallocation amounts to a purely theoretical maximum of temporary job losses, which does not reflect reality any better than perfect adjustment in the CGE model. In actual practice, unemployment will be far lower (even if

temporary) because expanding sectors will absorb workers and because of the natural ‘turn-around’ of workers – over 10 years in case of an FTA – in labour markets on their own initiative, be it because workers anticipate a firm’s weaknesses, or they move for other reasons, or invest themselves in upskilling, or move to other regions, or retire. Moreover, companies can and do change, and might develop strategies to minimise the negative impact by moving upmarket, altering their product portfolio or cutting costs in more radical ways. It is well known that labour markets demonstrate tremendous job movements every year, and certainly over the medium run. Hence, a small sectoral negative job effect may well be (and often is) a minor or even invisible ripple. Nevertheless, if job losses are suspected not to be so minor, adjustment assistance (such as active labour market policies) and social security are critical for an FTA not to have ‘losers’ or at worst only very temporarily so, and without major income loss. Section 19.6 on social adjustment to the consequences of the FTA elaborates on this issue and in the light of practical experience and other FTA (net) job gains. However, such adjustment questions refer to a small segment of industry – the simulation reported below will demonstrate that the FTA is likely to generate additional output and exports in many sectors whilst increasing economic welfare overall.

Box 19.1 provides a more technical explanation of the model set-up, underpinned by equations and other technicalities in Annex V.

Box 19.1 Technical explanation of the CGE model for calculating FTA economic impacts

The analysis of FTA scenarios (ambitious versus modest) integrates the trade cost reduction estimates discussed in chapter 18 with a computation model of world trade. The computer model effectively maps out a multi-sector general equilibrium structure with intermediate linkages and trade modelled as in Eaton & Kortum (2002), as extended to a CGE framework by Bekkers & Francois (2015). The chapter 18 estimates of trade cost reductions (due to tariffs and NTM reductions) are used in the computational model to simulate the effect of an EU-China FTA covering both tariffs and NTM-based trade costs.

The combined theoretical set-up and calibration for the CGE model relies on both the older CGE models (cf. Dixon & Jorgenson, 2013), and more structurally based quantitative trade models (see Costinot & Rodriguez-Clare, 2013, for an overview). The interaction of both analytical frameworks generates important synergies. For instance, following the new quantitative trade models, one can improve on the older CGE approach in two fundamental ways. First, trade linkages in CGE are modelled with the micro-founded Eaton & Kortum (2002) framework. Second, trade parameters have been structurally estimated and trade costs for goods employing a gravity model are derived from the theoretical structure of the CGE model (as discussed in the Appendix), using the same trade data that is used in numerical simulations. Under this approach, one obtains a detailed and consistent dataset for multi-sectors and countries with trade costs that explicitly include export taxes, international transport costs and import tariffs varying by country pairs and sectors.

Technical details on the model are covered in the appendix. Key points are that sectors are the same as in Table 17.2 above, while there are 110 countries in the model. Data are taken from GTAP9, which is benchmarked to 2011. In order to allow a period of adjustment for the FTA until 2030, IIASA/OECD macroeconomic projections and UN

population and labour force projections are employed to move these data to 2030. Simulations are then conducted with respect to this 2030 baseline. The baseline also includes full implementation of recent agreements (especially TPP and a stylised notion of TTIP).

19.2 Simulating economic impacts of ambitious and modest FTAs

For the purpose of impact simulation, two alternative stylised China-EU FTAs are distinguished – modest and ambitious. The first includes tariffs but limited NTM reductions. In the second, more ambitious NTM reductions are assumed. More precisely, the two scenarios are therefore as follows:

Modest Scenario

- Full elimination of tariffs
- 25% reduction in actionable NTMs affecting goods
- 25% reduction in actionable NTMs affecting services

Ambitious Scenario

- Full elimination of tariffs
- 50% reduction in actionable NTMs affecting goods
- 50% reduction in actionable NTMs affecting services

For NTMs, based on firm level evidence (Ecorys) we assume that NTMs involve a 50:50 mix of NTMs that raise costs and NTMs that generate rents.³⁰⁰

19.3 Results of the FTA simulation: Changes in GDP (in % and \$)

Table 19.1 below provides the estimates of the percent changes in GDP for China and EU member states in 2030, as impacts of both stylised FTAs, while Table 19.2 provides estimates of the annual (in 2030) dollar value of national real income changes. With respect to the reference year 2030, GDP is expected to be 1.16% higher in China and 0.43% higher in the EU under the modest FTA, but 1.87% higher in China and 0.76% higher in the EU in the ambitious scenario. On a percent basis, there is asymmetry in favour of China. On a dollar basis, the outcomes are seen to be more balanced: \$62.5 (€55.8) billion for China and \$54.3 (€48.5) billion for the EU in the modest case; \$99.7 (€89.1) billion for China and \$93.2 (€83.3) billion for the EU in the ambitious case.³⁰¹

³⁰⁰ In case regulatory barriers have the effect of reducing or even pre-empting highly competitive imports, local suppliers may enjoy high(er) mark-ups (or rents) on top of the cost price. Lowering the costs of such NTMs would have an additional pro-competitive effect.

³⁰¹ All values in euros are found by converting expected changes in GDP (dollars) with respect to the reference year 2030, using the dollar/euro exchange rate of 23 March 2016.

Table 19.1 Impact of FTA: Changes in GDP (%)

	Modest experiment				Ambitious experiment			
	A: Total B+C+D	B: tariffs	C: goods NTBs	D: services NTBs	E: Total F+G+H	F: tariffs	G: goods NTBs	H: services NTBs
China	1.16	0.56	0.57	0.04	1.87	0.60	1.19	0.08
European Union	0.43	0.13	0.28	0.02	0.76	0.14	0.58	0.04
Austria	0.44	0.16	0.26	0.02	0.75	0.17	0.54	0.04
Belgium	0.75	0.29	0.44	0.02	1.28	0.32	0.94	0.03
Cyprus	0.62	0.24	0.35	0.03	1.05	0.25	0.74	0.06
Czech Republic	0.76	0.23	0.51	0.02	1.35	0.25	1.06	0.04
Denmark	0.36	0.12	0.22	0.02	0.64	0.13	0.46	0.04
Estonia	0.82	0.29	0.50	0.02	1.42	0.31	1.06	0.04
Finland	0.36	0.12	0.20	0.03	0.62	0.13	0.43	0.06
France	0.33	0.09	0.23	0.01	0.59	0.10	0.47	0.02
Germany	0.53	0.20	0.31	0.02	0.91	0.22	0.65	0.04
Greece	0.28	0.02	0.25	0.01	0.57	0.02	0.52	0.02
Hungary	0.81	0.32	0.47	0.02	1.37	0.34	0.99	0.04
Ireland	0.52	0.11	0.35	0.06	0.95	0.12	0.72	0.11
Italy	0.43	0.12	0.29	0.01	0.76	0.13	0.60	0.03
Latvia	0.49	0.14	0.33	0.02	0.88	0.15	0.70	0.04
Lithuania	0.59	0.14	0.43	0.02	1.08	0.15	0.90	0.04
Luxembourg	0.28	0.06	0.17	0.04	0.51	0.07	0.36	0.09
Malta	0.39	0.07	0.32	0.00	0.80	0.07	0.72	0.01
Netherlands	0.37	0.07	0.27	0.03	0.69	0.07	0.55	0.07
Poland	0.54	0.16	0.36	0.01	0.95	0.17	0.75	0.03
Portugal	0.27	0.09	0.17	0.01	0.47	0.09	0.35	0.03
Slovakia	1.34	0.82	0.51	0.02	1.97	0.88	1.05	0.04
Slovenia	0.48	0.17	0.30	0.01	0.83	0.18	0.63	0.01
Spain	0.31	0.06	0.22	0.03	0.58	0.07	0.46	0.05
Sweden	0.33	0.10	0.22	0.02	0.59	0.10	0.45	0.04
UK	0.37	0.09	0.25	0.02	0.67	0.10	0.53	0.04
Bulgaria	0.43	0.07	0.32	0.04	0.83	0.08	0.67	0.08
Croatia	0.34	0.14	0.20	0.00	0.56	0.15	0.41	0.00
Romania	0.30	0.07	0.23	0.01	0.57	0.07	0.47	0.02

Note: Based on changes in GDP, quantity-based index.

Source: Authors' own calculations.

From the tables, one can also see variation in the effect across member states. While the two averages are 0.43% (modest) and 0.76% (ambitious), at individual member state level this may range as high as 1.34% (modest) to 1.97% (ambitious) for Slovakia. Indeed, peak effects in the table are concentrated in the smaller EU member states, though Germany, one of the larger economies within the EU, is estimated to gain almost 1% of GDP with the ambitious scenario.

Table 19.2 Impact of FTA: National income change (\$ million, 2030 benchmark)

	Modest experiment				Ambitious experiment			
	A: Total B+C+D	B: tariffs	C: goods NTBs	D: services NTBs	E: Total F+G+H	F: tariffs	G: goods NTBs	H: services NTBs
China	62,521	31,021	29,892	1,609	99,724	33,066	63,480	3,416
European Union	54,364	21,585	30,522	2,250	93,215	23,633	64,926	4,654
Austria	1,533	707	771	55	2,503	767	1,623	113
Belgium	2,540	1,176	1,314	50	4,245	1,306	2,836	103
Cyprus	62	17	39	5	114	19	84	11
Czech Rep.	965	324	615	27	1,716	356	1,305	55
Denmark	913	385	482	47	1,552	427	1,028	97
Estonia	102	36	64	2	181	40	137	4
Finland	824	419	360	45	1,320	458	769	93
France	5,795	1,877	3,719	198	10,402	2,054	7,940	408
Germany	19,294	10,255	8,520	519	30,518	11,202	18,239	1,078
Greece	124	-142	266	0	428	-145	569	3
Hungary	725	321	389	16	1,212	348	832	33
Ireland	895	220	557	118	1,645	230	1,172	243
Italy	5,528	1,878	3,469	181	9,804	2,094	7,341	368
Latvia	58	9	46	3	115	10	99	6
Lithuania	124	11	107	6	251	13	225	12
Luxembourg	112	34	65	13	201	36	136	28
Malta	26	2	23	0	57	3	54	0
Netherlands	1,885	362	1,342	181	3,583	385	2,820	378
Poland	1,560	394	1,111	54	2,856	417	2,330	109
Portugal	244	49	171	24	468	55	362	52
Slovakia	1,051	720	319	12	1,462	772	665	25
Slovenia	92	28	62	2	170	31	134	4
Spain	2,081	246	1,608	227	4,157	281	3,401	475
Sweden	1,672	669	919	83	2,836	725	1,940	171
UK	5,764	1,578	3,827	351	10,580	1,731	8,121	728
Bulgaria	102	-10	97	15	226	-9	204	31
Croatia	55	4	51	0	113	5	109	0
Romania	239	14	212	14	500	21	451	28

Note: Based on 'equivalent variation', prices relative to USD price of US GDP in 2011.

Source: Author's own calculations.

On a dollar basis, the greatest absolute gains accrue to the larger EU economies, led by Germany (\$19.3/€17.3 billion to \$30.5/€27.3 billion), and followed by France (\$5.8/€5.2 billion to \$10.4/€9.3 billion), the UK (\$5.8/€5.2 billion to \$10.6/€9.5 billion), and Italy (\$5.6/€5 billion to \$9.8/€8.8 billion).³⁰²

³⁰² All the values in euros are the expected changes in GDP on a dollar basis with respect to the reference year 2030 compared to the dollar/euro exchange rate of 23 March 2016.

19.4 Results of the FTA simulation: Changes in real wages for three skill groups

Table 19.3, Table 19.4 and Table 19.5, below, present changes in average real wages, i.e. deflated for the cost of consumption, by skill levels (low, medium and high). One observes that China's real wage gains are smaller than overall GDP gains, while EU gains are somewhat higher. This reflects the respective patterns of trade. The EU imports much more in consumer goods than vice versa – indeed, a large portion of which are mass consumer goods which (can) directly raise real disposable income of EU consumers via a reduction in the cost of living insofar as such imports from China are cheaper than local substitutes. One also observes a wide range of EU member state effects. Focusing on three variations across skill levels, the greatest real wage gains in the EU in percent are for low-skilled workers, with an EU average of 0.74% (modest FTA) and 1.13% (ambitious FTA). For medium-skilled workers this is 0.54% (modest FTA) to 0.84% (ambitious FTA), and for high skilled workers a gain of between 0.57% (modest FTA) and 0.88% (ambitious FTA).

The EU average low-skilled workers' wage gain of 1.13% for the ambitious FTA hides a great deal of variation, with Belgian and German low-skilled workers enjoying a 2% increase (2.01% and 1.90%), and rather small gains in some lower income EU countries (resp. Portugal (0.14%), Greece (0.30%), Romania (0.41%) and Bulgaria (0.43%)). But one cannot generalise on lower versus higher income EU countries: UK low-skilled workers would gain 0.76% and Czech ones 1.36%, or Luxembourg workers 0.53% and Hungarian ones 1.26%. However, the conjecture that (some) EU low-skilled workers might suffer income losses from an FTA with China is not confirmed: in all EU countries wages increase in both scenarios.

There is less variation between member state medium-skilled workers' wage gains than for low-skilled workers. The EU average of 0.84% for the ambitious FTA includes the highest wage gains for Slovakia (1.56%), Belgium (1.43%), Estonia (1.29%) and Germany (1.28%), whereas the lowest gains are slightly higher than in the low-skilled workers results: Greece (0.24%), Portugal (0.33%), Romania (0.51%) and Spain (0.53%).

For high-skilled workers in the EU, the averages for both scenarios are very similar to those for medium-skilled workers. Also the variation between member states hardly differs. The highest gains for high-skilled workers in the EU are expected for Slovakia (1.56%), Belgium (1.49%), Estonia (1.33%) and Germany (1.32%), whereas the lowest gains are expected for Greece (0.21%), Portugal (0.31%), Romania (0.46%) and Bulgaria (0.53%). For both medium- and high-skilled workers in the EU, no negative wage impact is found in any one of the 28 member states. For all three skill levels, Chinese workers are expected to enjoy slightly higher gains (resp. 1.34%, 1.01% and 1.18%) than the EU averages for the ambitious FTA.

Table 19.3 Estimated percent changes in real wages, low-skilled workers

	Modest experiment				Ambitious experiment			
	A: Total B+C+D	B: tariffs	C: goods NTBs	D: services NTBs	E: Total F+G+H	F: tariffs	G: goods NTBs	H: services NTBs
China	0.87	0.47	0.36	0.04	1.34	0.50	0.75	0.09
European Union	0.74	0.41	0.31	0.02	1.13	0.44	0.66	0.04
Austria	0.65	0.35	0.29	0.01	1.01	0.38	0.61	0.03
Belgium	1.33	0.78	0.54	0.02	2.01	0.84	1.14	0.03
Cyprus	0.59	0.29	0.27	0.02	0.93	0.32	0.57	0.04
Czech Rep.	0.85	0.40	0.43	0.02	1.36	0.43	0.90	0.04
Denmark	0.94	0.58	0.35	0.02	1.39	0.62	0.74	0.03
Estonia	1.02	0.56	0.43	0.03	1.57	0.61	0.91	0.06
Finland	0.92	0.57	0.32	0.03	1.35	0.62	0.67	0.06
France	0.60	0.31	0.28	0.01	0.95	0.33	0.59	0.03
Germany	1.30	0.82	0.47	0.02	1.90	0.88	0.99	0.03
Greece	0.12	-0.05	0.15	0.02	0.30	-0.06	0.30	0.05
Hungary	0.78	0.39	0.37	0.02	1.26	0.43	0.79	0.03
Ireland	0.71	0.28	0.39	0.04	1.20	0.30	0.82	0.08
Italy	0.58	0.30	0.26	0.02	0.90	0.32	0.55	0.03
Latvia	0.30	0.08	0.21	0.02	0.55	0.08	0.44	0.03
Lithuania	0.39	0.09	0.28	0.02	0.71	0.10	0.58	0.03
Luxembourg	0.31	0.09	0.19	0.02	0.53	0.10	0.38	0.05
Malta	0.33	0.10	0.22	0.00	0.61	0.11	0.50	0.01
Netherlands	0.53	0.19	0.30	0.04	0.89	0.20	0.62	0.08
Poland	0.42	0.16	0.25	0.01	0.70	0.17	0.51	0.03
Portugal	0.03	-0.06	0.09	0.01	0.14	-0.06	0.18	0.02
Slovakia	1.15	0.80	0.33	0.02	1.58	0.86	0.69	0.03
Slovenia	0.66	0.37	0.27	0.01	0.99	0.40	0.57	0.02
Spain	0.44	0.19	0.22	0.03	0.71	0.20	0.46	0.05
Sweden	0.80	0.44	0.34	0.02	1.22	0.47	0.71	0.05
UK	0.48	0.24	0.22	0.02	0.76	0.26	0.46	0.03
Bulgaria	0.20	-0.02	0.19	0.02	0.43	-0.01	0.40	0.05
Croatia	0.47	0.32	0.16	0.00	0.65	0.33	0.32	0.00
Romania	0.21	0.04	0.16	0.01	0.41	0.05	0.34	0.02

Source: Authors' own calculations.

Table 19.4 Estimated percent changes in real wages, medium-skilled workers

	Modest experiment				Ambitious experiment			
	A: Total B+C+D	B: tariffs	C: goods NTBs	D: services NTBs	E: Total F+G+ H	F: tariffs	G: goods NTBs	H: services NTBs
China	0.64	0.32	0.30	0.02	1.01	0.35	0.63	0.03
European Union	0.54	0.28	0.24	0.02	0.84	0.31	0.50	0.04
Austria	0.53	0.28	0.23	0.02	0.83	0.31	0.49	0.04
Belgium	0.93	0.52	0.40	0.01	1.43	0.56	0.84	0.03
Cyprus	0.55	0.28	0.24	0.03	0.87	0.30	0.52	0.05
Czech Rep.	0.67	0.32	0.34	0.01	1.08	0.35	0.71	0.02
Denmark	0.61	0.34	0.24	0.03	0.93	0.36	0.51	0.05
Estonia	0.84	0.47	0.36	0.01	1.29	0.51	0.76	0.03
Finland	0.50	0.28	0.19	0.03	0.77	0.31	0.40	0.06
France	0.45	0.23	0.21	0.01	0.71	0.24	0.44	0.02
Germany	0.86	0.52	0.32	0.02	1.28	0.56	0.68	0.04
Greece	0.10	-0.02	0.11	0.01	0.24	-0.02	0.23	0.03
Hungary	0.57	0.28	0.28	0.01	0.93	0.30	0.60	0.03
Ireland	0.57	0.20	0.27	0.11	0.99	0.21	0.56	0.22
Italy	0.45	0.22	0.22	0.01	0.72	0.24	0.46	0.02
Latvia	0.44	0.18	0.24	0.02	0.74	0.20	0.52	0.03
Lithuania	0.44	0.16	0.27	0.01	0.77	0.17	0.57	0.02
Luxembourg	0.30	0.11	0.16	0.03	0.51	0.12	0.33	0.07
Malta	0.26	0.07	0.18	0.00	0.50	0.07	0.42	0.01
Netherlands	0.42	0.16	0.23	0.03	0.71	0.17	0.48	0.06
Poland	0.44	0.19	0.24	0.01	0.72	0.21	0.49	0.02
Portugal	0.19	0.06	0.11	0.02	0.33	0.07	0.23	0.03
Slovakia	1.14	0.80	0.33	0.01	1.56	0.86	0.68	0.02
Slovenia	0.48	0.28	0.20	0.00	0.73	0.30	0.42	0.01
Spain	0.32	0.14	0.16	0.02	0.53	0.15	0.33	0.05
Sweden	0.51	0.27	0.22	0.02	0.79	0.29	0.46	0.04
UK	0.41	0.19	0.20	0.02	0.66	0.21	0.42	0.04
Bulgaria	0.34	0.09	0.21	0.03	0.62	0.10	0.44	0.07
Croatia	0.40	0.26	0.14	0.00	0.57	0.27	0.30	0.00
Romania	0.30	0.12	0.18	0.01	0.51	0.13	0.37	0.02

Source: Authors' own calculations.

Table 19.5 Estimated percent changes in real wages, high-skilled workers

	Modest experiment				Ambitious experiment			
	A: Total B+C+D	B: tariffs	C: goods NTBs	D: services NTBs	E: Total F+G+H	F: tariffs	G: goods NTBs	H: services NTBs
China	0.73	0.35	0.36	0.02	1.18	0.37	0.76	0.05
European Union	0.57	0.30	0.25	0.02	0.88	0.33	0.52	0.04
Austria	0.57	0.31	0.24	0.02	0.87	0.33	0.51	0.04
Belgium	0.97	0.55	0.41	0.01	1.49	0.59	0.87	0.03
Cyprus	0.57	0.29	0.26	0.03	0.91	0.31	0.54	0.06
Czech Rep.	0.73	0.34	0.37	0.01	1.18	0.37	0.78	0.03
Denmark	0.65	0.37	0.25	0.03	0.98	0.39	0.53	0.05
Estonia	0.86	0.48	0.37	0.02	1.33	0.52	0.78	0.03
Finland	0.61	0.37	0.22	0.02	0.92	0.40	0.47	0.05
France	0.48	0.25	0.22	0.01	0.75	0.27	0.46	0.02
Germany	0.89	0.54	0.33	0.02	1.32	0.59	0.70	0.03
Greece	0.08	-0.03	0.10	0.01	0.21	-0.03	0.22	0.02
Hungary	0.64	0.32	0.31	0.01	1.04	0.34	0.67	0.03
Ireland	0.59	0.23	0.29	0.08	1.00	0.24	0.61	0.16
Italy	0.46	0.23	0.22	0.01	0.74	0.25	0.46	0.03
Latvia	0.43	0.17	0.24	0.02	0.72	0.18	0.51	0.03
Lithuania	0.43	0.13	0.28	0.01	0.76	0.14	0.59	0.03
Luxembourg	0.31	0.12	0.16	0.03	0.53	0.13	0.33	0.07
Malta	0.33	0.07	0.26	0.00	0.68	0.08	0.59	0.01
Netherlands	0.44	0.16	0.24	0.03	0.74	0.17	0.51	0.06
Poland	0.42	0.17	0.24	0.01	0.70	0.18	0.49	0.02
Portugal	0.17	0.05	0.10	0.02	0.31	0.06	0.21	0.03
Slovakia	1.13	0.79	0.33	0.01	1.56	0.85	0.69	0.03
Slovenia	0.54	0.31	0.22	0.01	0.81	0.33	0.46	0.01
Spain	0.33	0.14	0.16	0.02	0.54	0.15	0.34	0.05
Sweden	0.58	0.32	0.24	0.02	0.89	0.34	0.51	0.05
UK	0.44	0.22	0.21	0.02	0.71	0.23	0.44	0.04
Bulgaria	0.28	0.05	0.19	0.03	0.53	0.06	0.41	0.07
Croatia	0.41	0.26	0.15	0.00	0.58	0.27	0.31	0.00
Romania	0.27	0.09	0.17	0.01	0.46	0.10	0.35	0.02

Source: Authors' own calculations.

19.5 Results of the FTA simulation: Effects on trade

19.5.1 Aggregate trade flow effects

Table 19.6 below provides an overview of changes in EU and Chinese trade patterns. EU exports to China increase by between 79.2% (modest) and 110.64% (ambitious), while there is a tiny drop in exports to the rest of the world. Overall, EU exports go up by between 2.2% and 3.2%. China's exports to the EU increase by between 39.2% (modest) and 56.9% (ambitious), with a larger increase in total exports than for the EU. In addition, in the China case, there is a slight increase in exports to the rest of the world. Overall (not shown), combined EU and China exports to the rest of world drop slightly, by between 0.25% (modest) and 0.28% (ambitious).

Table 19.6 Modest and ambitious FTA: Changes in bilateral trade (in %)

	Modest	Ambitious
China total exports	9.00	12.90
EU total exports	2.21	3.18
EU exports to China	79.20	110.64
China exports to EU	39.20	56.89
China to ROW	0.79	0.93
EU to ROW	-0.47	-0.57

Note: ROW = rest of the world.

Source: Authors' own calculations.

19.5.2 FTA effects on sectoral EU and China's global exports and imports

Figure 19.1³⁰³ and Table 19.7 present indicators of changes in performance for sectors in goods and services for the EU and for China. Performance is defined here as changes in sectoral output, in export and imports. The greatest effects are concentrated in machinery: non-electrical machinery and equipment; electrical machinery; motor vehicles; textiles; clothing; and footwear. The effect on sectoral output is a combination of the influence of exports on sectoral output, together with complex secondary effects. Figure 19.1 and Table 19.7 are aggregated sector totals, hiding often many distinct products, which, in turn, require many inputs, and may in some cases themselves serve as inputs for other products too. It may well be that additional exports (to China or elsewhere) might induce extra imports (of inputs) from China or elsewhere. Sectors may also comprise segments where China has a comparative advantage and other segments where EU producers have comparative advantages or developed a competitive edge. Some sectors may not export much (or not at all) to China and the FTA might lower trading costs for Chinese exporters in selling in Europe. If the Chinese have comparative advantages, this is likely to exert a negative effect on EU sectoral output. Against this background, it is important to realise that Figure 19.1 and Table 19.7 are *not* about bilateral trade but about EU and Chinese trade, respectively, with the *world*. Similarly,

³⁰³ Figure 19.1 is derived from data reported in Table A2 in Annex III.

because of secondary effects, e.g. intermediates or other inputs, one cannot assume a direct relationship between the effects on exports and imports on the one hand, and sectoral output on the other; there may well be offsetting demand from other sectors, for example.

Focusing on the ambitious scenario for the EU (Figure 19.1), six out of 34 sectors witness a decline in output: wood, pulp and paper; electrical machinery; other manufactured goods; textiles; clothing (apparel); and leather products. The last three can hardly be surprising since China – despite recent wage hikes – still holds a comparative advantage *vis-à-vis* EU countries. As a consequence, output decline in these sectors is considerable (between 4.85% and 7.31%). Competing with China in these products only makes sense if one targets the high-value-added segments in the final markets. Eight sectors increase output by more than 1%: construction, primary metals, other machinery (in which EU producers are world leader), motor vehicles (with the largest growth of 3.23%), other transport equipment, petrochemicals, air and maritime transport. Reading the export and import changes, the analysis is too aggregated to fully grasp all relevant determinants. But if EU sectoral exports are negatively impacted or increase only marginally whilst imports rise appreciably, sector output tends to be negatively affected. There are a few special cases. One is processed foods, plus beverages and tobacco, where the EU is a world leader and already enjoys large world exports but also maintains significant barriers. The increase in EU exports is relatively small in percentages, mainly because EU world exports are already large (and the additional exports to China do not count for all that much) and imports increase as well (in part due to inputs, from cacao beans to soya; in part because barriers fall away). Another is public services. This is a sector (see Table 18.2) where trade is less than 0.4% of EU-China trade (in both directions). The limited trade in this sector includes a mix of education and health care services. While direct trade liberalisation in this sector is not modelled here, estimated changes in output driven by general equilibrium effects are still reported.

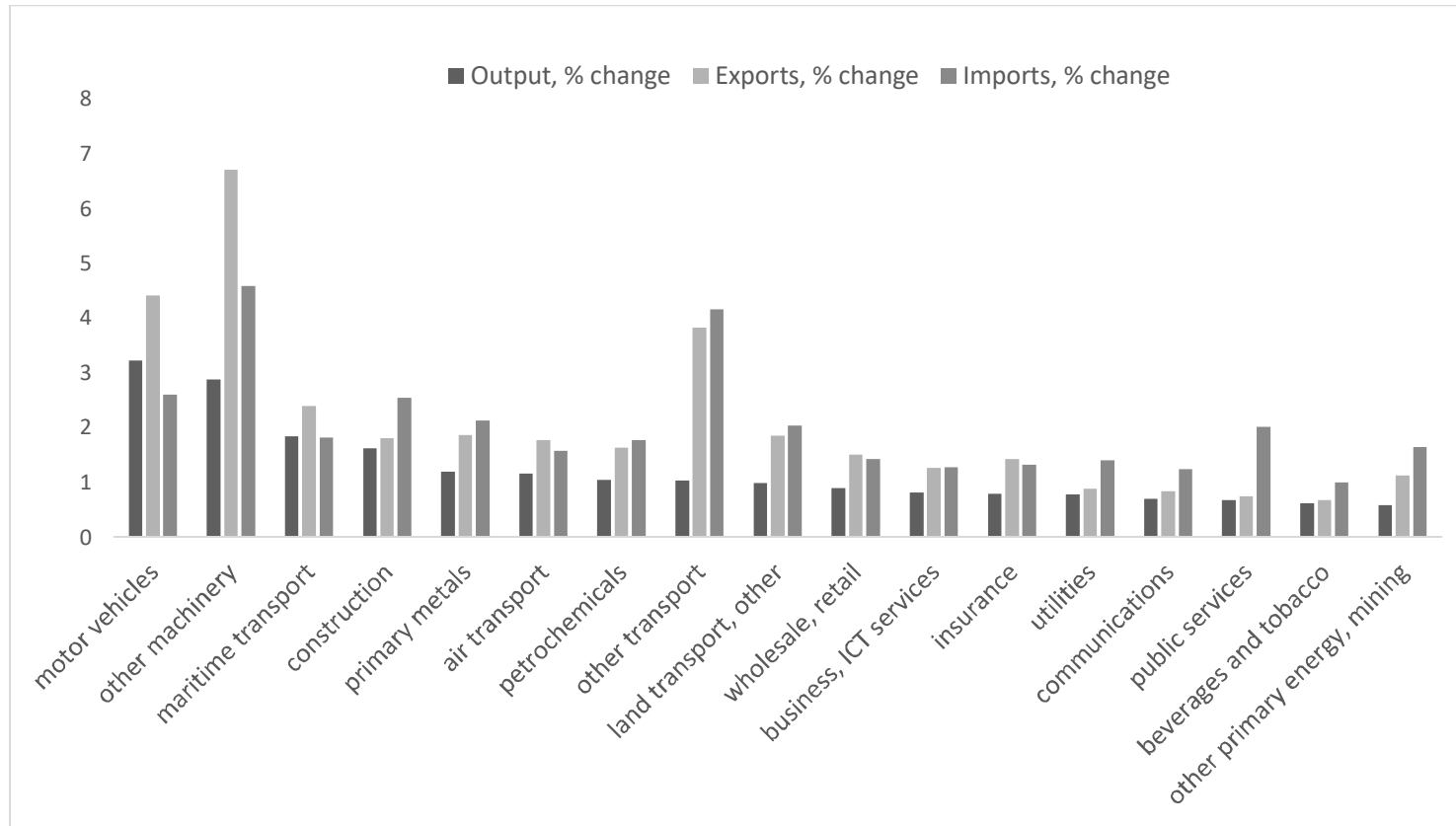
Table 19.7 describes the expected changes, due to the FTA and all its effects, in sectoral output, exports and imports of China. A glance at the table shows immediately that sectoral output effects in China have similar magnitudes (in percent), though perhaps slightly higher than in EU sectors, but that is not at all the case for (its world) exports and imports changes, which tend to be much larger in many sectors than for the EU. Focussing first on sectoral output changes, 17 of 34 sectors have changes above a 1% increase (with four sectors above 5%, namely, electrical machinery, textiles, clothing and leather products), and five sectors are expected to witness a decline in output, two of which would experience significant decreases (other machinery, at - 2.87%; motor vehicles, at - 9.13%). However, changes in Chinese sectoral exports and imports are often large, if not very large. For the ambitious FTA scenario, Chinese exports always increase and only five out of 34 sectors do this with less than 1%. No fewer than 18 sectors increase exports by more than 5%, 11 sectors with more than 10% and two of them (other machinery; other transport equipment) even with more than 20%.

On the import side, no fewer than 13 sectors would have import growth above 10%, seven of which would be even higher than 20%, with four extremes: fabricated metal products (36.27%), other machinery (44.83%), motor vehicles (44.11%) and other

transport equipment (52.42%). In the two sectors where China would expect a substantial negative impact on sectoral output, it is the vast difference between extra imports and extra exports which points to a significant adjustment: in other machinery, exports would rise 22% but imports 45%, and in motor vehicles, Chinese exports would increase 11% but imports no less than 44%. The simultaneity of such export and import growth at the sectoral level strongly suggests that there is so-called 'intra-industry trade' between the EU and China (that is, supplies to the EU of products, e.g. low-skilled-labour-intensive intermediates with low/medium technology, and supplies to China made with high-skilled labour and medium-to-high technology), perhaps even within multinational firms. It can also be noted that in the three sectors where China has clear comparative advantages (textiles, clothing, leather products) *vis-à-vis* the EU, Chinese sectoral import growth rates are higher than export increases, which may point to value chains ending in China before exporting to the EU. Finally, in business/ICT services and especially in air transport, output changes are modest in China but sectoral imports are much higher than exports. Both sectors are protected in China and the ambitious FTA with the EU might well unleash the potential. However, the domestic Chinese market is so big that the effect on sectoral Chinese output remains limited (be it that air transport has a slight negative effect).

The overall conclusion for sectoral effects is that many sectors benefit in both the EU and China, but not all. Combining Figure 19.1 and Table 19.7, one observes a significant displacement of Chinese motor vehicle production, with a mirrored expansion in the EU. The same holds for non-electrical machinery and equipment. The opposite pattern holds for electrical machinery, textiles, clothing and footwear. In all of these, we see a reduction in output in the EU, and a shift in production to China. This is also reflected in trade data. In motor vehicles, for example, we have an increase in bilateral trade, but with a much larger increase in EU exports to China, compared to Chinese exports to the EU (on a percent change basis).

Figure 19.1 FTA effects on EU output, export and import. Change by sectors, ambitious scenario



Source: Authors' own configuration.

Table 19.7 FTA impact: Output and trade effect per sector in China

	output, % change		exports, % change		imports, % change	
	modest scenario	ambitious scenario	modest scenario	ambitious scenario	modest scenario	ambitious scenario
primary agriculture	0.73	1.00	2.24	3.50	4.62	6.34
forestry	0.87	1.44	2.12	3.84	2.76	4.69
fishing	0.39	0.56	0.25	0.61	4.16	5.92
oil and gas	0.31	0.49	0.53	0.79	1.05	1.75
other primary energy, mining	0.14	0.29	0.46	0.78	0.13	0.50
utilities	0.48	0.78	1.72	2.84	1.18	2.86
construction	1.53	2.43	3.28	5.92	5.36	10.81
wood, pulp, paper	1.46	2.52	2.86	4.77	3.33	5.31
non-metallic mineral products	1.33	2.11	6.71	8.95	11.30	13.13
primary metals	-0.58	-0.68	5.41	8.40	2.42	4.62
fabricated metal products	0.85	1.64	10.42	15.60	28.51	36.27
other machinery	-2.16	-2.87	16.34	22.77	32.46	44.83
electrical machinery	3.55	5.31	6.95	11.01	5.20	9.20
motor vehicles	-6.68	-9.13	7.29	11.14	34.37	44.11
other transport	-0.03	-0.55	14.57	21.17	33.18	52.42
other goods	1.50	2.81	6.80	11.58	22.64	28.52
processed foods	0.54	0.69	11.24	13.87	10.25	14.08
beverages and tobacco	0.28	0.48	0.51	0.51	4.01	2.44
textiles	4.44	5.58	7.87	10.04	10.37	13.72
apparel	5.64	7.07	15.22	18.91	16.32	20.54
leather products	4.71	5.76	10.71	13.28	20.19	26.09
paper products, printing	0.55	0.83	3.30	6.50	3.62	6.05
petrochemicals	0.46	0.80	2.33	4.57	1.61	2.74
chemicals, rubber, plastics	0.55	0.83	6.80	10.01	5.34	7.61
wholesale, retail	0.55	0.88	0.62	0.99	2.00	3.90
air transport	0.07	-0.50	3.04	5.20	7.30	16.05
land transport, other	0.87	1.44	4.50	8.70	0.47	1.01
maritime transport	0.77	1.17	1.91	2.76	2.16	4.60
recreational, other services	0.72	1.15	1.38	2.55	2.48	4.73
communications	0.81	1.27	1.37	2.08	0.49	1.22
finance	0.84	1.29	1.02	1.50	3.65	7.69
insurance	0.30	0.29	1.59	2.99	3.69	7.38
business, ICT services	0.66	0.94	2.80	5.35	5.05	10.29
public services	0.73	1.19	1.06	1.98	2.71	5.07

Source: Authors' own calculations.

19.6 Strategies for adjustment to a China/EU FTA

19.6.1 *Globalisation with Chinese characteristics: winners and losers in adjustment*

Economic welfare and income gains for the EU and China arising from FTAs are important. However, that is not always how FTAs are perceived in the political debate prior to ratification. Identifying winners and losers, certainly in the short run, is a prevalent theme for policy-makers and the notion of 'net positive gains for society as a whole' is discussed less frequently than the minimisation of the damage for temporary losers. But the uncomfortable truth is that freer trade and investment tends to accentuate the differences between high productivity firms/sectors and those having lost comparative advantage or failed in catching up with productivity trends. In other words, unless one would wish to 'freeze' a status quo with low(er) productivity firms surviving behind protection, one unfortunately "needs" such sectors or firms, which are lagging behind, to "adjust" (that is, improve productivity in many ways, or exit, thereby setting free factors of production to move to other, higher productivity sectors³⁰⁴) so that overall productivity trends move up. That is the source of economic growth and, here, of the income gains. It is a fact of life that adjustment for the winners is far easier than for the losers. The winners are also far less voluble in the debate, leading to the (selective) impression in some circles that trade is more negative than it really is.

For a China/EU FTA, similar sentiments and expectations are likely to play a role. However, there is probably more to it. This is due to the experience of both the rapid growth of Chinese export-led, low-skilled-labour-intensive specialisation ever since the early 1990s, and the exceptionally large and swift absorption of hundreds of millions of low-skilled workers from the vast Chinese countryside into manufacturing during these two-plus decades, creating incessant adjustment pressures in, for example, OECD countries (and to some extent in some developing countries). The unusually heavy adjustment pressures are said to have led to repeated, if not continuous, job losses – concentrated on low-skilled workers and, at times, in EU regions specialised in low-skilled sectors competing with an emerging China – and to wage restraints, again for the low-skilled in certain sectors. There are even indications that the overburdened adjustment processes in these activities widened the wage gap between the low-skilled and other workers, especially in the US but possibly also in the EU. Section 19.6.2 will briefly discuss the economic background of this adjustment and some empirical evidence. Section 19.6.3 will discuss the temporary job losses that might be caused by a China-EU FTA and how they can be minimised.

19.6.2 *Socio-economic aspects of adjustment to (Chinese) globalisation*

In the case of China-EU trade, a very large part of the adjustment out of comparative disadvantage sectors and activities has already happened during the past two or three

³⁰⁴ It is of course also possible to relocate the production to low-wage countries. In that case, 'exit' from EU markets might nevertheless still leave selective activities in the EU as a destination market and/or as the origin of high-value-added elements of the value chain.

decades. In future, trade and investment with China will increasingly be two-way, within sectors. EU sectors which have already adjusted to Chinese and other emerging economies' imports of low-skill-intensive manufactures, and survived, have probably moved upmarket in niches which require specialised or higher-skill inputs or particular designs. Bilateral growth in goods trade will mainly be in medium-skill, if not high-skill, intensive sectors and in services as incorporated in goods or accompanying these goods. Of course, such a process of adjustment takes time. Therefore, if a China-EU FTA would be concluded soon, there will still be lingering adjustment issues and some sectors are bound to shrink in the margin. The overall gains from the FTA in economic welfare and in jobs are likely to outweigh by far any job losses and sectoral shrinkage. Nevertheless, a case to be made for or against a China-EU FTA cannot be complete without considering the adjustment problem, sectorally, in labour markets and in size.

Economists tend to point out (rightly) that job gains and losses are an ordinary phenomenon of each economy every year, indeed every month or day. Jobs may be lost for many reasons, including business cycle downturns, loss of competitive advantages of companies *vis-à-vis* other companies, loss of comparative advantages in the world economy, technological changes (including labour-saving automation and IT processes), a shift away of demand for one's products or services, bad management, etc. Therefore, from an economic point of view, it is anything but obvious why job losses from freer trade and investment should be so great that policy and politics get involved. On the other hand, there need not be anything wrong with attention for temporary losers as long as, eventually, markets can play their role. Moreover, a job loss is only a (temporary) problem if a new job, preferably in the same sector if special sectoral skills are giving an advantage to such workers, cannot be readily found. But even between sectors, workers move voluntarily all the time. Indeed, workers do move between different jobs so massively (so-called 'churn'), that expected job losses from a trade agreement, if any, tend to be a small fraction of this churn. Only workers who are regionally concentrated and/or harder to absorb due to age or 'wrong' skills pose a problem. That problem ought to be recognised and governments should help in addressing it.

Nevertheless, in the past two or three decades, the sheer size of Chinese export efforts has had a negative effect on manufacturing jobs in the EU as well as a downward or at least restraining effect on wages in both poor countries competing in similar products³⁰⁵ and rich countries in import-competing sectors. There are also indications that these sectoral wage restraints can sometimes be so large that they might spill over to the rest of the economy, at least for lower-skill-intensive sectors. In turn, this might cause greater income inequality, insofar as skill composition might engender such an impact.³⁰⁶ Recent empirical economic literature has provided solid evidence that, in

³⁰⁵ For example, after the termination of the Multi-Fibre Arrangement in 2005, a number of developing countries lost huge export earnings to China due to sudden exposure to Chinese competition.

³⁰⁶ In addition, China has recently built up massive overcapacities in some sectors. However, overcapacity is mainly found in capital-intensive industries like steel and aluminium. It might force unemployment in some sectors in importing countries and, if the (Chinese) losses from overcapacity

recent decades, Chinese 'infinite' supply of unskilled workers has exerted a downward effect on (real) wages in the competing sectors in the US.³⁰⁷ But there has always been some doubt whether a worsening of wage inequality, attributable to trade with 'China', also applied to European low-skilled workers, or whether real wages and their increase over time were better protected, be it eventually at the cost of job losses or company exits from the market.³⁰⁸

Recent empirical analysis investigated the relationship between trade integration with partners like China and undesirable effects such as (large and sudden) labour displacement and worsening of inequality. The relevance of distinct skill levels of workers is critical to the outcomes of adjustment. Following Lechthaler & Mileva (2015), one should take care to distinguish i) low skills from higher skills, ii) both types of workers in comparative disadvantage sectors (D) and in comparative advantage sectors (A) and iii) the short run and the medium run. In the short run, workers (and other factors) from D sectors will only gradually relocate to A sectors, and if the speed of transition is high (as was the case with upcoming China), a (temporary) scarcity of workers in A sectors will emerge, prompting rising wages for both skilled and low-skilled workers in A sectors. The gradual relocation of workers may be slowed down by the necessity of reskilling, upskilling, temporary labour hoarding and/or the search for a job in another region; before the actual relocation, there is likely to be (temporary) unemployment. The retained (skilled and low-skilled) workers in the D sectors will see their wages coming under pressure as demand decreases. In the medium run, the D firms survive in a slimmed or up-market form (or indeed exit) and the downward wage pressure disappears; the opposite happens in the A sectors, once the relocation and up/re-skilling is completed and greater experience of the relocated workers begins to matter. Thus, it seems that both job losses and greater wage inequality are temporary phenomena. Unfortunately, this is not entirely correct. The continuous, decades-long wage pressures in D sectors can have structural effects on the remuneration of low-skilled (blue-collar) workers.

For the US, Autor, Dorn & Hanson (2013) have found that, in total, globalisation ('China') has reduced the number of jobs for the low-skilled (D) sectors³⁰⁹ and caused persistent wage losses, due to permanent adjustment. Whether this applies to the EU is not at all clear. Detailed European research on the issue in response to Freeman (1995) in Brenton & Pelkmans (1999) showed the complexity of the matter. Most (though not all) scholars maintained serious doubts whether EU low-skilled workers, whose employment was surely under threat, also suffered from what Freeman called 'immiserization' (a rising gap between the remunerations of skilled and low-skilled workers, with the effect of keeping blue collar real wages at the same level between the

are covered by subsidies, it is nothing else than a beggar-thy-neighbour policy. But it is hardly a question of low wages.

³⁰⁷ This was already feared by US labour economists in the mid-1990s, famously set out in Freeman (1995), pp. 15-32.

³⁰⁸ This is the theme in Brenton & Pelkmans (1999), confirming this suspicion with empirical analysis.

³⁰⁹ Indeed, according to the authors, one quarter of the decline in US manufacturing jobs (1990-2007) can be attributed to increasing trade with China.

mid-1960s and the early 1990s) due to trade. However, several authors found empirical evidence that the continuation of (low-skilled) wage rises in Europe might have accelerated labour displacement and thus temporary unemployment arising from trade with 'China'. Recent work on German trade with China between 1988 and 2008 (Dauth, Findeisen & Suedekum, 2014:1643-1675) shows the pattern that Lechthaler & Mileva simulate: substantial job losses in import competing (D) sectors and much more job creation in export (A) sectors.

Moreover, there is another structural effect: with significant adjustment, going on for as long as two decades or more, the specialisation patterns in the EU (and the US) have themselves been transformed. Specialising in A sectors in Europe implies a structurally higher demand for medium- and high-skilled workers, and much less for low-skilled workers – this skill premium reflects a (non-reversible) upward shift in real wages in A sectors. This would tend to have an adverse effect on wage inequality between more and less skilled workers. Indeed, there are trends in Europe showing exactly this, but one has to be careful before drawing the inference that this is due to trade, or even more precisely, to trade with China. In recent literature on EU labour markets, 'trade' is only one amongst a series of determinants for what is sometimes called 'job polarisation' (see, e.g. Beblavy, Maselli & Veselkova, 2014, ch. 7). Other determinants include skill-biased technological progress, growth of the service sector (which may actually increase the demand for low-skilled in important segments), employer preferences and organisational change. Indeed, there is empirical evidence (Ibid., p. 142) that recent advances of IT application causes a threat to *medium*-skilled workers more than low-skilled ones. Furthermore, one also has to be careful to associate low-skilled workers solely with D sectors. They are found and needed in practically all sectors and this, in and by itself, should facilitate the gradual absorption into many other sectors.

The previous assessment is partially confirmed by Lawrence (2014), analysing the effect of Chinese imports on job displacements in the US between 2000 and 2007. He notices that displacement has been substantial but represents only one-fifth of the annual total displacement in the US manufacturing industry (the sector most affected by strong Chinese competition) and less than 5% of the job displacement in the overall economy. This result confirms that there is an effect, painful for the affected sectors and workers, but relatively modest compared to the overall workforce. According to his calculations, a potential China-US FTA could bring, in the long run, a job displacement of 1.04 million workers, 800,000 of them from manufacturing sectors. To put this into perspective, Lawrence also shows that these one million workers (over a period of 10 years) represents a miniscule fraction of the 'churn' in the US labour market, suggesting thereby that US labour markets can easily handle such tiny frictions.

19.6.3 Labour displacement in the EU and how to minimise it

The CGE estimation does not confirm the conjecture that (some) EU low-skilled workers might suffer income losses from an FTA with China, as in all EU countries the workers see real wages increase in both scenarios. This probably means that the EU, in the recent past, has *already adjusted* quite significantly to the strongest comparative advantages of China. The FTA is likely, in sectors with relatively many low-skilled workers, not to

lead to a drastic new downward adjustment, although a few shrinking sectors will be observed. It can also be interpreted as a result of second-order effects (in general equilibrium), for instance, that the overall rise in economic activity – due to the FTA – also benefits the sectors under some competitive threat. But these effects have to be understood in the context of the CGE modelling where a change in overall employment (which is fixed, by assumption) does not take place; jobs may reduce in number in, say, D sectors and increase in A sectors, but there will be no change in (un)employment, because adjustment is flexible and immediate. Therefore, one has to realise that, *in the model*, and of course *not* so fast and *not* so smoothly in actual practice, workers adjust via immediate reallocation between sectors. This model-approach has the effect that, on the one hand, workers in marginally contracting sectors can minimise a wage decline via the reallocation of some of them, and, on the other hand, the mobile workers can immediately join in the expansion of the sectors enjoying increasing demand.

Of course, EU (and Chinese) policy-makers and EU workers alike need to understand how the CGE simulations with respect to labour can be best interpreted for the reality of EU workers involved: that is, the actual practice of adjusting (over, say, the period) until 2030. Trading with a middle-income emerging economy like China can, in actual practice (rather than in the CGE model) of adjustment in European labour markets, bring about labour ‘displacement’ that may cause temporary unemployment. If and insofar as this would happen, the overall benefits to the EU economy would not be enjoyed by, at the least, the workers (and at least for a period) losing their jobs. Policy-makers and stakeholders should first consider whether and to what extent this might happen, and, second, take effective measures to ensure that temporary ‘losers’ are compensated and given new opportunities. Labour displacement would occur when workers, leaving a (D) sector having lost comparative advantage *vis-à-vis* China, cannot immediately be absorbed into another (A) sector with rising demand (*unlike* what the model would assume). If one were to pay attention only to those sectors where the simulation suggests a contraction in the EU (in China, sectoral contractions can be seen to be even larger), it is likely that selected job losses would be found. Of course, overall, there are clearly far more extra jobs, but these might be different jobs in different sectors and/or be found in different regions or countries.

Because the CGE model is based on ‘given’ employment, no CGE simulation of induced, temporary unemployment can be generated:³¹⁰ all initial workers retain a job, but perhaps a different job in a different sector at a different wage. However, a proxy of the other extreme, namely, all relocated workers, i.e. which have to be mobile “in the model” between sectors, can be calculated roughly. This approach is very extreme, as it suggests that not a single one of these ‘mobile’ workers would be absorbed immediately in another sector: all would first become unemployed. This never happens in actual labour market practice in such an extreme fashion and it also disregards several other key issues. So, in assessing adjustment issues to a China-EU deep FTA at this stage, one

³¹⁰ It would require a sub-model of labour markets in which various frictions and labour market institutions (including ‘insiders’ and ‘outsiders’) would generate unemployment. However, it has proven very difficult to make such models ‘fit’ the CGE model approach.

is between the two extremes: no induced unemployment – as the great flexibility of workers and of their wages in the CGE model generates perfect and immediate adjustment – and a theoretical maximum ‘labour displacement’, if no adjustment whatsoever would take place, at least not immediately. Figure 19.2³¹¹ shows the results for all EU countries and China, and for workers at three skill-levels, as before. Figure 19.2 shows very clearly that – for all 28 EU countries and China – low-skilled workers would theoretically experience the largest displacement. With Malta and Slovakia as ‘outliers’, suggesting a theoretical displacement of low-skilled workers as high as 8% (Malta) and 5% (Slovakia), the EU average for low-skilled workers would be 1.9%. Above this EU average, one also finds countries like Finland, Germany and Hungary. Unfortunately, there is no rigorous analytical way to determine in between these two extremes, how large or small the job losses caused by the FTA are likely to be. What can be done is to provide four critical considerations that go far in mitigating expectations that would be too pessimistic.

First, CGE models ignore (they are ‘static’) several options of workers in labour markets. Jobs are lost every day in labour markets, for many reasons, and workers have options to deal with such bad news. In actual practice, workers do anticipate, especially in vulnerable sectors, competitive threats and may (and do) seek to work elsewhere; they may seek private upskilling or even retraining; they move to other regions (even if, in the EU, such mobility is not very high, it is not irrelevant); they retire and if adjustment takes years, this does reduce pressures. Second, companies have options, too, and often exercise some of them. Only some companies in vulnerable sectors are relocating towards lower-wage countries (even inside the EU) or exiting from the market. Otherwise, companies may seek to upgrade their product portfolio, thereby reducing their vulnerability *vis-à-vis* China; widen their portfolio; invest in innovative products or variations; or change their business model, e.g. with a combination of different ‘tasks’ in global value chains. Third, the design of the final FTA may (and usually does) anticipate the adjustment problems by explicitly using ‘time’ as a factor. In the case of vulnerable sectors with relatively more low-skilled workers, the tariff reductions are typically ‘back-loaded’ over the period during which the FTA articles are introduced. That means that they are known when the FTA treaty is concluded, but become actually relevant only after a number of years (say, beginning after five or seven of the 10 years assumed throughout this study). This back-loading facilitates the adjustment for workers and companies alike, so that labour displacement need not lead to – or leads to far fewer – job losses without immediate prospects. Fourth, ‘time’ also plays a crucial role for another reason, perhaps even more important. China still grows more rapidly than the EU and this will continue for the entire period until, say, 2030. In those 13 years or so, Chinese wages will rise quickly and comparative advantages precisely in low-skilled-intensive sectors will become less pronounced or fade away. Moreover, the famous ‘unlimited supply of unskilled labour’ in China (coming in from the western or central countryside) has not only dried up but actually been shrinking in recent years, whilst rapid growth in services (with a range of skill levels) will compete with labour demand for low-skilled industrial sectors. These developments will also

³¹¹ Figure 19.2 is based on data reported in Table A3 in Annex III.

slowly weaken China's edge in several low-skilled labour-intensive sectors. None of this can be incorporated in the CGE model, even when anticipation of income levels in 2030 has been applied. These four considerations together significantly brighten the otherwise sombre outlook for low-skilled workers.

Whereas Figure 19.2 provides details on displacement of workers per EU country as well as China, Figure 19.1 identifies sectoral impacts. The sectors in the EU that will suffer most from the trade liberalisation in terms of export and output changes are textiles, apparel and leather products, whilst the 'winners' will be motor vehicles, transport equipment and other machinery. As indicated in the previous section, sectors will be affected in different ways in the two economies: while (A) sectors such as motor vehicles, non-electrical machinery and equipment are supposed to expand in Europe with a contraction in China, other (D) sectors as electrical machinery, textiles and clothing, and footwear will contract in the EU and expand in China, with more exports to the EU. The shifts in services sectors are also investigated. However, the gains associated with the sectoral shifts in services depend on the effective reduction of the costs of NTMs, as services have no tariffs. The problems that the empirics of estimating AVEs give rise to (see Box 18.1) are especially pertinent in services, rendering it difficult to draw firm conclusions on job displacement. This does not mean, however, that the service dimension is not important. Quite the contrary, it is, and for two reasons. First, the reduction of the costs of NTMs in services can create huge gains - even if calculations are not yet a firm guide in services, chapter 11 leaves no doubt that they are quite high and severely hinder trade between the EU and China. Second, under an FTA, one can expect a major role for EU exports in services (and, if feasible, FDI in services sectors) due to the current lack of supply of Chinese services. Services are a strong EU asset and amount to a major offensive interest for the EU in FTA negotiations.

What labour displacement remains, due to the FTA, even when the periods of temporary unemployment are not known in advance, should be properly addressed by explicit and clear policy action. Some of the cushioning is automatic, given the national welfare states in the EU. However, the ambitions of the welfare states differ considerably in Europe. The better approach is to complement national welfare states by 'active labour market policies'. However, whereas the EU decides EU trade policies (in which the member states have decision-making power when the negotiation mandate has to be formulated and at the end when the FTA treaty has to be ratified), member states decide on their welfare state policies as well as active labour market policies. The latter can be costly, and some EU countries prefer not to develop such instruments very much, fearing claims and entitlements that they cannot fully control, given budgetary disciplines.

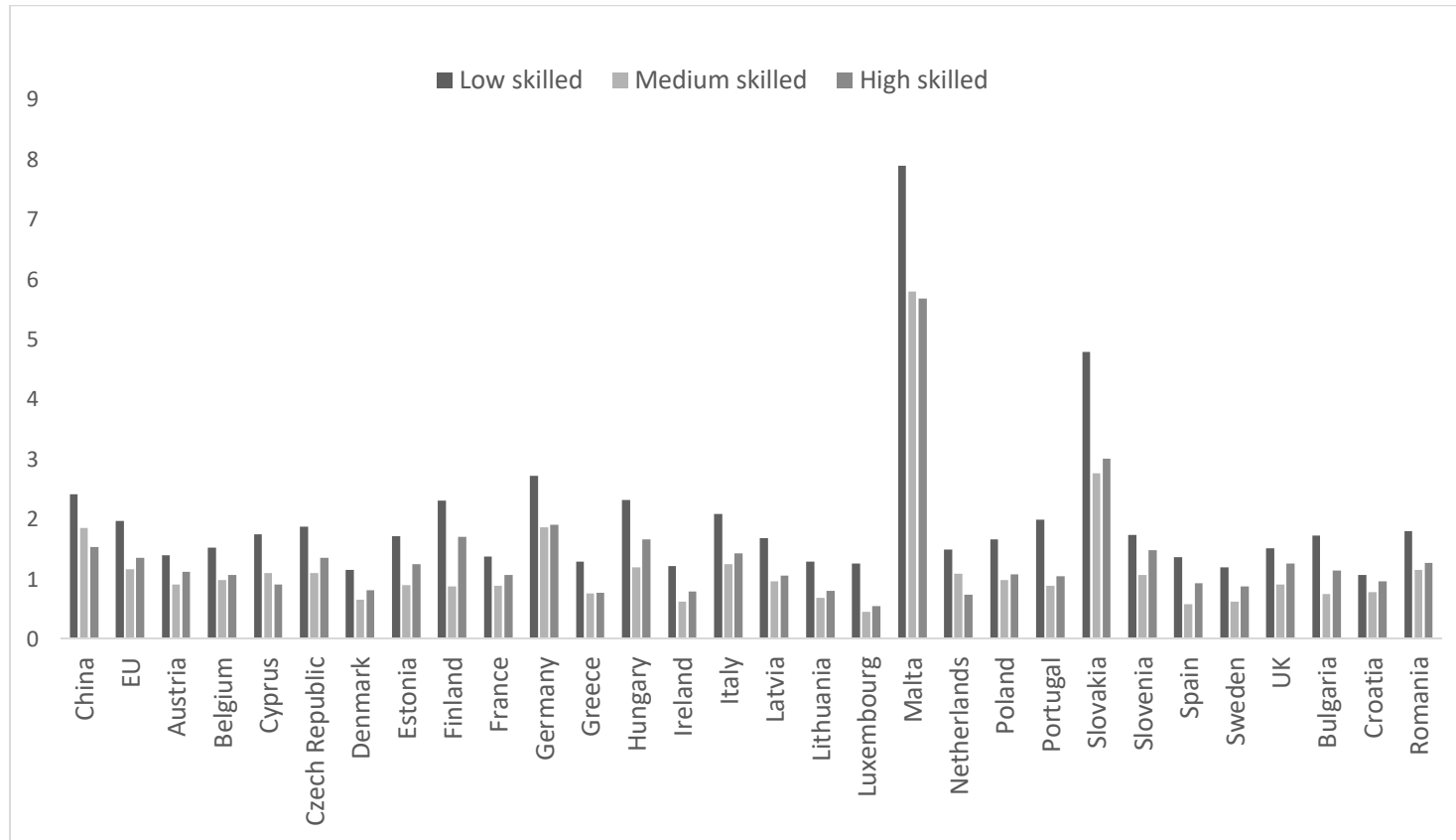
An alternative might be to set up EU funding for helping workers to relocate between sectors as a result of the China-EU FTA. This could consist of a variant of the EU Globalisation Fund or a special form of adjustment assistance under the EU Social Fund, but it might also be conditional funding for EU member states to improve on their active labour market policies. Such policies would consist of (effective) retraining, upskilling, job search support, etc., preferably with the active involvement of the private sector in each EU country (especially the A sectors). A practical problem is that the EU is active in concluding many FTAs and it is exceedingly hard to justify why the China-

EU FTA ought to be singled out as 'special', and not the one with Vietnam or the upcoming ones with Mexico (upgraded FTA), Malaysia, Thailand or the Philippines.

The focus above is on temporary job losses and how to smoothen adjustment for the workers involved. There is also the potential issue of the worsening of wage inequality. The socio-political judgment of whether or not this adverse trend, largely a skill premium issue in the final analysis, is to be addressed by active new policy-making is not an EU competence but clearly in the realm of the member states. It is likely to differ between member states, too. As noted, there is a host of determinants of inequality trends, not just trade (with 'China'). It is possible to design policy instruments to address inequality trends in the short and medium run.³¹²

³¹² Lechthaler & Mileva (2015) analyse several (e.g. tax) instruments for the short run (but there are trade-offs with the incentives to reallocate between sectors, and/or, with the incentives to upskill) and for the longer run (principally, subsidies for retraining and upskilling, which - if effective and maintained for a sufficiently long period - could eventually slightly reduce the scarcity of skilled workers, leading to less inequality to some degree).

Figure 19.2 Labour displacement (percent based on weighted standard deviation), ambitious scenario



Source: Authors' own configuration.

PART IV. CONCLUSIONS AND POLICY IMPLICATIONS

20. Policy implications of an EU-China free trade agreement

The EU focus in its trade policy on bilateral and regional FTAs, in particular with dynamic markets in East Asia, finds its logical sequel in an FTA with China. China is, by far, the EU's largest trading partner in the region, if not beyond, at least in goods. For cross-border trade in services and investment (often also in service sectors), the interdependence is to a lesser degree (due to many and heavy restrictions) but still impressive and can potentially become much greater than today. Chinese FDI is steadily increasing in the EU as well. The EU has cautiously begun to discuss publicly the option of a China-EU FTA, under two conditions: first, concluding successfully the CAI; and second, making the subsequent FTA meaningful by realising significant advances in Chinese reforms towards a genuine and more open market economy. The logical sequel is therefore beginning to be pursued and is worth exploring in earnest. This exploration is exactly what the present study aims to do. Without claiming that the present study is exhaustive (which was impossible anyway given time and resources), it is nevertheless very broad and encompassing. It can serve as a sound analytical basis for a much-needed debate on this FTA option.

China's policy position is explicit: it is interested in exploring the FTA option with the EU, as declared by President Xi Jin Ping in the spring of 2014. China has, so far, concluded rather 'shallow' FTAs (mainly focused on tariff removal and directly related issues, and a mere cooperative stance on 'regulatory' questions, but without incorporating public procurement). The 'new logic', following the profound Chinese reforms announced in late 2013, is that China should switch towards a more ambitious trade and investment strategy commensurate with its reforms. Doing this together with its largest trading partner and major foreign investor (certainly given recent trade policy developments in the region) can only strengthen this logic. Government and other prominent Chinese in, e.g. business and academia, have invited China's trading partners to exert 'pressures' in order to stimulate and further the domestic reforms. The EU's preference to conclude 'deep and comprehensive' FTAs is an ideal 'fit' for China to support its reform process, as such FTAs are intrusive, binding (in terms of domestic regulation and disciplining restrictions) and bound to affect many areas of reform as pronounced in the Third Plenum. Such a deep and comprehensive FTA is also a 'partnership' for functional reasons, including perhaps even a 'living agreement' helping to address complicated regulatory issues over time and preferably together. The partnership formula would seem to accord well with the Chinese cultural preference to

build up long-term relationships combining aspects of commitment and active cooperation.

An EU-China FTA would represent the new logic, too, by moving firmly beyond today's numerous (approximately 60) bilateral cooperation programmes, as well as by going decisively beyond the various plurilateral WTO negotiations via bilateral 'deepening'. The FTA would not be in conflict with either: the plurilateral negotiations on public procurement, green goods and trade-in-services with a large group of WTO partners can be continued without any problem. Moreover, cooperation is an often agreed additional element of many FTAs whether formally 'in' the treaty text or decided and organised separately. The present study includes a number of references to highly useful China-EU cooperation programmes, including in consumer safety, SPS, IPR, GI and competition policy questions, all relevant areas for a deep and comprehensive FTA.

Besides the 'new logic' as an overall strategic approach, the study provides five specific arguments which underpin the rationale for an EU-China FTA: the greater economic potential of the trade and investment relationship, addressing the issue of comparative market access, the incentives from 'mega-regionals', the link between Chinese reforms and the exposure to foreign competition which an FTA would bring about, and geopolitical advantages. Therefore, a China-EU FTA has a powerful rationale. But it is also about jobs on both sides. Today, some 2.5 million jobs in the EU are directly involved with EU goods exports to China, hence, not even counting jobs linked with cross-border services and the EU jobs connected with the large imports from China, e.g. in mass consumer goods ending up in the retail sector. A deep FTA would yield a net increase in jobs.

A deep and comprehensive FTA implies the bilateral removal of (practically) all tariffs. Here it is critical that the tariff peaks in goods from industrial sectors where the EU has a comparative advantage (machinery, electrical machinery and automotive) are fully removed. The same goes for four sectors in agro-food (beverages, sugar and confectionary, processed agro-goods and dairy products) where Chinese tariff peaks are quite high. Tariff rate quotas are, interestingly enough, more problematic on the EU side than on the Chinese side. The EU TRQs should perhaps be simplified and become less numerous anyway. The Chinese TRQs are fewer, simpler and often in commodities that the EU is hardly or not exporting (e.g. wool, rice, cotton, etc.). The outlook for agro-goods may thus be quite good, which is helpful because the incipient Chinese demand for EU agro-foods is very strong. Pursuing full tariff removal in the FTA, with only limited and few exceptions, should also facilitate the sourcing by wholesalers, retailers and other large importers in China, which has already proven to be so successful and much to the benefit of European consumers. Both industrial and agro-food trade is hindered by technical barriers to trade and food and food safety and animal welfare regulatory and inspection barriers. The study makes an effort to chart these issues, using various sources of information, but solid, detailed surveys are not available. Both TBTs and SPS questions are more problematic on the Chinese side, because of profound 'systemic' aspects, which are explained in some detail. Both are likely to represent legacies of the old planned economy with a dose of institutional overkill and inefficiencies. In both cases, only intrusive reforms (not least, institutional) are required to overcome the costly difficulties. In SPS, there is also a continued need for capacity

building of technical expertise throughout the country, hence, the existing SPS cooperation between the EU and China should be maintained if not intensified. In TBTs, a major overhaul of the standardisation and technical regulation regime was initiated in 2015 and China has recently requested consultation input. This multi-annual reform process should be supported actively by the EU and the European standardisation bodies.

Services cannot but be central to the FTA. Negotiations ought to focus on both cross-border services trade, now (selectively) restricted severely, and mode 3, FDI in services markets in China. The EU has a liberal FDI regime and some lingering restrictions in services, but far fewer than in China. Both are important offensive EU interests and their linkage is quite essential. The present EU position is a product of the recent past: the CAI negotiations already begun in 2012. The EU takes the understandable position that the CAI should first be concluded successfully, which means both modern investment protection and good services market access (pre- and post-establishment). If that were to happen, this would be a splendid stepping stone for an FTA. Indeed, doing away with the most restrictive FDI regime of all OECD and G20 countries fits perfectly the domestic reforms in China. The CAI is exactly the kind of discipline and 'pressure' that China is asking for. But if the CAI negotiations would linger too long, without tangible results (note that the US has had 22 sessions with China over seven years, the EU so far only eight sessions), the opportunity costs of not starting FTA negotiations begin to rise. It is worth considering whether an FTA (with a combined chapter on services and FDI as in EU FTAs with Vietnam and Canada) might not offer greater opportunities to find a common deal, even when this will take some extra time. After all, in EU business and for some EU member states, the plain lack of a level-playing field with respect to FDI (Chinese enterprises have no problem investing in the EU, with full national treatment and judicial review) will become much more of an issue if the steady rise of Chinese FDI in Europe continues.

The study explains in detail today's predicament of public procurement in China. The origin and purpose of the Chinese public procurement regime, installed in recent decades, has everything to do with domestic budget disciplines and control and also fits anti-corruption campaigns at local and federal level. It is now time China begins to accept more fully that public procurement is also a trade openness question. A China-EU FTA cannot be realised without China adhering first to the GPA (the WTO plurilateral). China is getting closer to GPA membership, after six offers. In the sixth offer, the formal offer and the substantive meaning are too far apart (in particular, due to SOEs) and China, at some point, will have to bite the bullet. Again, this is a 'fit for purpose' contribution to its domestic reforms. If the willingness to reform is genuine, this can be shown to the EU (and other trading partners in the GPA) by joining under proper conditions. The EU-China FTA negotiations will then form a GPA-plus framework. However, if the reforms amount to little more than window-dressing, clearly, a China-EU FTA is not going to be possible in public procurement, or indeed, in other areas as well (e.g. services, FDI, standardisation, etc.).

In contrast, in IPRs and GIs, China has achieved a fairly advanced legislative framework and in several of its FTAs, a TRIP-plus approach has been assumed. The EU and China are negotiating a stand-alone GI treaty, with (now) up to 100 proposed GIs

on the table. The prospect of an FTA is good, in principle, with respect to these two areas. “In principle” because there is one major problem: seriously deficient enforcement, as is clear from numerous reports violating EU companies’ rights (and rights of Chinese companies and individuals as well, a huge problem in China) and from the massive amount of counterfeited goods arriving at EU borders (over 65% of all detections). China is unique in the inclination of countless people and small companies to counterfeit or commit other IPR violations, far outdoing any other country. Given the EU’s prominent position in luxury goods and for reasons of advanced patent protection, it is the enforcement issue that has to be tackled more forcefully in cooperation in an FTA.

State-owned enterprises in China (hardly any of which exist in the EU) are as much a liability as a formidable force. An FTA between the EU and China cannot be negotiated in earnest without addressing the biggest-of-all-legacies problem from the old planned economy. Explicit or implicit, the SOE question is also the ‘elephant in the Chinese reform room’ and addressing the issue decisively therefore amounts to a litmus test. SOEs are often giant firms (with three in the top 10 of the Fortune 500). SOEs have privileged positions in some manufacturing sectors, e.g. steel, and dominate, often supremely, a range of services markets. A number of these markets are also closed or severely restricted for foreign firms. They have access to various forms of privileged finance as well as hidden subsidies or loss coverage, sometimes at provincial level. Their CEOs are appointed or approved by the Party. Their recent privatisation is mostly done via holdings, e.g. listed on the Hong Kong stock exchange, but the ‘daughter’ companies remain just as powerful as before and usually without competitive challenge. Recent overcapacities in, e.g. steel, have increased for far too long, almost certainly because SOEs are heavily involved and have been facilitated (and workers are concentrated in certain mono-specialised provinces or localities, which makes adjustment extra painful). In the case of SOEs, most of the domestic reform issues coincide with the trade and investment issues. A chapter on SOEs in an FTA should be formulated at the level of the EU-Vietnam FTA of 2015, as a first stage, with a firm commitment to enter a second stage of greater ambition like the SOE chapter of TPP (which China has, so far, been loath to join) or (still better) that of CETA.

The study also includes empirical estimates about economic impact, on the time horizon 2011-30, of a stylised form of the FTA in terms of GDP (in percent and in euros), GDP of all EU member states, bilateral trade (also sectorally) as well as the EU’s and China’s exports to and imports from the rest of the world (given second-order effects and repercussions in global value chains, etc., calculated in the model), real wage effects for workers with three skill levels distinguished, and, finally, a discussion about adjustment in the light of possible temporary unemployment due to labour displacement and the risk of worsening wage inequality. The GDP (and presumably other) effects amount to a significant *underestimate* for various reasons, e.g. no investment impact (nor its secondary influence on bilateral trade in goods and services) and no dynamic or innovation effects. There are also technical imperfections in the empirical techniques applied to the costs of regulatory barriers (NTMs), especially in services, as this is exceedingly difficult to do.

The GDP increase of an ambitious FTA, over the 20-year time horizon considered, amounts to 1.76% for China and 0.76% for the EU; all EU member states benefit but with considerable variation. It should be noted that 0.76% for GDP (already an underestimate) is higher than the estimate for TTIP. Remember that this is bound to be an underestimate. It would be too much to expect, however, that one single FTA, an act of one single EU policy – namely trade policy – can affect GDP in a massive way. The increase in GDP and sectoral activity overall implies many extra jobs for both economies. The same positive impact goes for trade and real wages. The impact on bilateral trade is large (for the EU, some extra 110%). Real wages go up in all member states; indeed, low-skilled workers all benefit in all member states. However, the latter is a pure result from the CGE model used for the computations. Such models are capable of generating all these many, highly specific results but have to employ some simplifying assumptions. One is a ‘given’ employment in the economy, together with full flexibility of wages and (costless) ‘immediate’ reallocation of workers between shrinking and expanding sectors. This way, markets can always clear and all initial workers will have a job after the FTA is in force, albeit perhaps a different job in a different sector. Of course, these unrealistic assumptions make it a long-run model when adjustment can occur over time. In the short run, unemployment (following labour displacement in a few import-competing sectors) is likely to occur.

There are four reasons which EU authorities and workers should consider when assessing the risk and magnitude of temporary unemployment. All four tend to reduce the risk, or render adjustment smoother and shorter, without eliminating it fully: i) workers can themselves exercise options reducing exposure to such a risk, ii) companies can (and do) exercise strategic options, iii) the FTA can be designed in such a way that the most vulnerable sectors will be exposed only late in the transition period (so-called ‘back-loading’ of, e.g. tariff reductions) and, finally, iv) China will continue to see its wages rise over the period to 2030 and also shift to medium-skilled intensive sectors, thereby lessening the pressures on the relevant import-competing sectors in the EU. Details are set out in chapter 19. Member states (and possibly the EU) should accompany the FTA with ‘active labour market policies’, possibly in a coordinated action. This should include upskilling (and its liberal funding) and effective retraining of low-skilled workers, with the social partners involved.

An FTA between China and the EU is worthwhile for a host of reasons. The economic potential in bilateral trade is shown to be large (more than a doubling) and this does not include possibly powerful investment effects and their repercussions for bilateral trade in goods and services. Strategically, the FTA should be significant, because it can only succeed when China implements the reforms it has announced and complements them with additional ones on SOEs and the opening of public procurement. In this sense, the FTA is even more beneficial to China than to the EU (the model cannot incorporate these aspects). A deep and comprehensive FTA is a perfect ‘fit’ for China at its current stage of development, expressing the ‘new logic’ knowing its announced reforms, whilst the EU can finally pursue the ‘logical sequel’ in its trade policy vis-à-vis dynamic East Asia.

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ANNEX I. EUROPEAN TRQS

While the Chinese out-of-quota tariffs are all *ad valorem* and do not differ within the HS 2- digit level, the European scheme is far more complicated as it either reports *ad valorem* tariff, specific tariff (euro per tonne or hl) or a combination of both. Furthermore, some lines at 8-digit levels are grouped in the same TRQ specification, creating overlapping in-quota quantities between products aggregation at 4digit level. For example, the “High quality meat of bovine animals, fresh, chilled or frozen” TRQ groups together fresh and frozen meat, but they are in HS 0201 and 0202, respectively. Hence, the assigned in-quota quantity of 37,000 tonnes has to be split between the two consecutive categories; this has been marked with a (*) in Table A1. Some out-of-quota duties are also seasonal, leading to changes in the specific tariff depending on the period of the year (e.g. “High quality oranges” in HS 0805). Another peculiarity refers to those in-quota duties that are *specific tariff* only and change the unit of measure from tonnes, in in-quota, to 100kg, in out-of-quota (e.g. HS 0203).

The source used is the Tariff Analysis Online (TAO) facility maintained by the WTO, which gives access to TRQs data with product lines at 8-digit levels that then need to be separated and re-classified in their 4-digit class. Due to the all the ‘obstacles’ mentioned above, a detailed note with all the symbols used follows to simplify the reading.

Table A1. European TRQs

HS codes	Products	No of lines	In-quota duty (% if not specified)	Out of quota duty (% if not specified)	In-quota quantity (tonne if not specified)
	Total	269			
01	Live animals	9			
0102	Bovine animals, live	6	6	10.2 + €93.1/100 kg/net	5,000 Head + 169,000 Head
0104	Sheep and goats, live	3	10	€80.5/100 kg/net	39,310
02	Meat	94			
0201	Meat of bovine animals, fresh or chilled	5	20	12.8 + €176.8 to €303.4/100 kg/net	37,800 (*) + 11,000 (*) + 5,000 (*) + 4,000 (*) + 300 (*)
0202	Meat of bovine animals, frozen	8	20	12.8 + €176.8 to €304.1/100 kg/net	37,800 (*) + 5,000 (*) + 4,000 (*) + 300 (*) + 53,000 (*) + 2,250 + 50,700 +
0203	Meat of swine (pork), fresh, chilled or frozen	16	€268 to €434/1000kg	€46.7 to €86.9/100 kg/net	15,000 + 5,500 + 7,000 + 34,000 + 5,000
0204	Meat of sheep or goats, fresh, chilled or frozen	27	10	12.8 + €90.2 to €311.8/100 kg/net	800 (carcasses weight) + 283,825 (carcasses weight)
0206	Edible offal, bovine, swine, sheep, goat, horse, etc.	2	20	12.8 + €303.4 and €304.1/100 kg/net	37,800 (*) + 53,000 (*) + 1,500 + 11,000 (*) + 5,000 (*) + 4,000 (*) + 300 (*)
0207	Meat & edible offal of poultry, fresh, chilled or frozen	36	€93 to €512/1,000 kg/net; 0 (-1410/50/70 and -2710/20/80)	€18.7 to €102.4 /100 kg/net; €41.0 to €102.4 /100 kg/net	6,200 + 4,000 + 15,500 + 700 + 1,000 + 2,500

04	Dairy products	57			
0402	Milk and cream, concentrated or sweetened	1	€475/1,000 kg/net	€118.8/100 kg/net	68,000
0405	Butter and other fats and oils derived from milk	7	€86.88/100 kg/net (-1011/19); €948/1,000 kg/net (-1030/50/90, -9010/90)	€189.6/100 kg/net; €189.6 or €231.3 /100 kg/net	76,667 + 10,000
0406	Cheese and curd	43	€17.06/100 kg/net (-9001/21); €130 to €1,064/1,000 kg/net	€167.1/100 kg/net; €139.1 to €231.3/100 kg/net	4,500 + 10,250 + 4,000 + 18,400 + 5,200 + 15,000 + 20,000 + 5,300 + 19,500
0407	Birds' eggs, in the shell, fresh, preserved or cooked	1	€152/1,000 kg/net	€30.4/100 kg/net	135,000
0408	Birds' eggs, not in shell & yolks, fresh, dry, etc.	5	€176 to €711/1,000 kg/net	€30.4 to €137.4 /100 kg/net	7,000
07	Edible vegetables	23			
0701	Potatoes (except sweet potatoes), fresh or chilled	1	3	9.6	4,000
0703	Onions, shallots, garlic, leeks etc., fresh or chilled	1	9.6	9.6	38,370
0706	Carrots, turnips & other edible roots, fresh or chilled	1	7	13.6	1,200
0707	Cucumbers and gherkins, fresh or chilled	1	2.5	12.8 + €37.8 /100 kg/net	1,100
0709	Veg. nesoi, fresh or chilled	1	1.5	7.2	500 (*)
0711	Veg., temporarily preserved, not now edible	11	1.5; 12 (-9040)	4.8 to 12, 5.1 + €9.4 /100 kg/net (-9030), €13.1 /100 kg/net (-2090); €9.6 + €191.0/100 kg/net eda	62,660 + 500 (*)
0712	Veg., dried, whole, cut etc., no added prep	1	10	12.8	12,000

0714	Cassava arrowroot etc., fresh or dry	6	6; 0 (-2090)	€9.5/100 kg/net; €6.4/100 kg/net	5,500,000 + 1,325,590 + 5,000 + 600,000
08	Edible fruits and nuts	15			
0802	Nuts nesoi, fresh or dried	2	2	3.5 or 5.6	90,000
0803	Bananas	1	€75/1,000 kg/net	€680/1,000 kg/net	2,200,000
0805	Citrus fruits, fresh or dried	5	10 (-1010/30/50); 2 (-2090); 6 (-3010)	3.2 (from June 1 st to Oct 15 th), 16.0 (from Oct 16 th to Nov 30 th), from 3.2 to 16.0 + €7.1 /100 kg/net (from Dec 1 st to March 31 th); 16.0 + €10.6/100 kg/net; 6.4 + €25.6/100 kg/net	20,000 + 15,000 + 10,000
0806	Grapes, fresh or dried	1	9	17.6 + €9.6/100 kg/net	1,500
0808	Apples, pears and quinces, fresh	4	0; 5 (-2050)	4.8 + €23.8/100 kg/net; 10.4 + €23.8/100 kg/net	600 + 1,000
0809	Apricots, cherries etc.	2	10 (-1000); 4 (-2095)	20.0 + €22.7 /100 kg/net (from June 1st to July 31th) and 20 (otherwise); 12.0 + €27.4/100 kg/net	500 + 2,500 + 800
10	Cereals	33			
1001	Wheat and meslin	2	0	€95.0 (10019099) or €148 (10011000)/t	300,000 + 50,000 + 2,981,600
1003	Barley	2	€8(-0090) or €16 (-0010)/t	€93/t	50,000 + 300,000
1004	Oats	1	€89/t	€89/t	21,000
1005	Corn (maize)	1	0	€94/t	2,000,000 + 500,000
1006	Rice	25	€88/t (-2011/13/15/17/92/94/96/98); 0 (-3021/23/25/27/42/44/46/48/61/63/65/67/92/94/96/98 and -4000)	€264/t; €416/t and €128/t (-4000)	1,000 + 20,000 + 63,000

1007	Grain sorghum	1	0	€94/t	30,000
1008	Buck wheat, millet & canary seed	1	€7/1,000 kg/net	€56/t	1,300
11	Milling industry	2			
1104	Cereal grains, nesoi, germs worked etc.	1	0	€93/t	10,000
1108	Starches, inulin	1	€170.59/1,000 kg/net	€166/t	1,300
16	Prep. of meat	10			
1601	Sausages	2	€502 (-0099) or €747 (-0091)/1,000 kg/net	€100.5 (-0099) €149.4 (-0091)/100 kg/net	3,000
1602	Prep. or preserved meat	8	€271 to €784/1,000 kg/net	€54.3 to €156.8 /100 kg/net	6,100
17	Sugars	8			
1701	Cane or beet sugar	7	0	€33.9 (-1110, -1210), €41.9 (-1190, -1290, -9100, -9910/90)/100 kg/net	1,304,700 + 85,463
1702	Sugar nesoi	1	20	16.0 + €50.7 /100 kg/net mas	4,504
20	Prep. of veg., fruits, nuts	7			
2003	Mushrooms and truffles prep.	2	23	18.4 + €191 (-1020) or €222 (-1030)/100 kg/net eda	62,660
2009	Fruit juices	5	13 (-1199); 40 + 20.6 €/1,000 kg/net (-6011); 40 (-6019); 22.4 (-6051, -6090)	15.2; 40.0 + €121/hl + €20.6/100 kg/net; 40.0 + €121.0/hl; 22.4 + €131(-6051) or + €27(-6090)/hl	1,500 + 14,000
22	Beverages	2			

2208	Ethyl alc, undenat, und 80% alc, spirit bev	2	€0.2/ %vol/hl + €0.6/hl (-4010); €0.2/ %vol/hl (-4090)	€0.6/ %vol/hl + €3.2/hl; €0.6 /%vol/hl	2,855,000 liters 100% alcohol
23	Residues and waste from food	7			
2302	Bran, sharps etc. from working cereals	4	€30.6/1,000 kg/net (-3010, -4010); €62.25/1,000 kg/net (-3090, -4090)	€44/t; €89/t	475,000
2309	Prep. Used in animal feeding	3	0 (-9031/41); 7 (-9051)	€23(-9031); €55 (-9041); €102 (-9051) /t	100,000 + 20,000 + 2,800
35	Albuminoidal	2			
3502	Albumins and albumin derivatives	2	€617/1,000 kg/net (-1190); €83/1,000 kg/net (-1990)	€123.5/100 kg/net; €16.7 /100 kg/net	15,500 (shell egg equivalent)

Notes: This table separates 8-digit lines, belonging to the same 4-digit category, that have different In-quota and/or Out-of-quota duties. Thus, the first out-of-quota tariff before the semi colon refers to the first in-quota tariff (and its 8-digit line) before the semi-colon. It stands for the first 4 digits the products have in common; the forward slash symbol (/) stands for the digit number 5 and 6 the products have in common.

* Indicates that the in-quota quantity is shared between two or more 4-digit categories.

Source: Authors' own calculations.

ANNEX II. PUBLIC PROCUREMENT IN CHINA AND THE EU

China's public procurement regime is governed by the Government Procurement Law (2003)³¹³ and the Tendering and Bidding Law (2000), as well as their respective implementing rules. The Implementing Rules of the Government Procurement Law only came into force on 1 March 2015, and, inter alia, imposed the mechanism of governance in a bidding exercise. Surely, European business in China is not yet convinced and provides many examples of how explicit bans and much more subtle barriers continue to frustrate their access. As to the public procurement laws, questions such as clearer definition as to the scope of application, uniformed national-wide enforcement, are yet to be resolved.

Chinese public procurement regime

The Government Procurement Law applies to procurement of goods, services and works³¹⁴ listed in the Centralised Procurement Catalogue, which does not intend to be an exhaustive list but rather used for the purposes of classification and statistical compilation.³¹⁵

The Catalogue, revised from time to time, is issued by the Ministry of Finance or provincial bureau of finance, depending on whether the purchase of the procurement items comes under the central budget or local budget.³¹⁶ Procurement may be undertaken by centralised or decentralised means. For items listed in the Centralised Procurement Catalogue, procurement must be undertaken by centralised procurement agencies. Centralised procurement accounted for 84.8% of government procurement in 2014, amounting to RMB 1.47 trillion,³¹⁷ or €188 billion in equivalence, down from 86% in 2013 and 87.6% in 2012. Decentralised procurement refers to procuring items that are not listed in the Centralised Procurement Catalogue, but have a value above a certain

³¹³ A revision to the law came into force on 31 August 2014.

³¹⁴ Within the remit of the Government Procurement Law (Art. 2), works refer to construction, reconstruction, expansion, renovation, demolition and repair of buildings or building structures.

³¹⁵ Cai Ku (Department of Treasury, Ministry of Finance) Ordinance (2000), No. 20: Circular on the Issuance of the Catalogue of Articles of Government Procurement.

³¹⁶ Art. 8 of the Government Procurement Law.

³¹⁷ WTO Trade Policy Review, Report by the Secretariat, China, WT/TPR/S/300/Rev.1, 17 October 2014, p. 105.

procurement threshold specified by governments at various levels.³¹⁸ Decentralised procurement may be carried out by a procuring agency itself, or through some centralised procurement agencies.

The Tendering and Bidding Law governs work related to construction projects, and its coverage is divided to include voluntary and compulsory coverage. State enterprises, government or quasi-governmental institutions, even private purchasers may voluntarily bind themselves to procedures specified by the Law when procuring goods, services or works through open or restricted tendering.³¹⁹ Works, including survey, design, construction and supervision, of public interest or security, such as infrastructure and utilities of large scale including those fully or partially invested or financed by the State; and those financed by loans or aid provided by international organisations or foreign governments fall within the remit of compulsory coverage.³²⁰

Challenges and inconsistencies with the GPA

China's public procurement system was established in the 1990s. Previously, as a strictly state-controlled planned economy, administration of public procurement was undertaken through budgetary control. The legacy nonetheless continues now that China is working towards an open economy in the sense that, to date, application of public procurement rules are triggered by fiscal funds, but under the proviso that public procurement serves as a policy driver for *domestic* purchase of goods, works and services. In other words, the basic idea is a 'buy-China' approach. Exceptions are possible only under limited circumstances.³²¹ As to the definition of "domestic", Art. 10 of the Government Procurement Law simply refers to "the relevant stipulations issued by the State Council".

On technical terms, China's government procurement regime does not appear consistent, especially concerning coverage since many covered entities at different administrative levels are competent to compile their respective Centralised Procurement Catalogue. Similarly, procurement laws emphasise the need for economic efficiencies in procurement, of which the principle for procurement is "lower than average market price, more procurement efficiency, excellent quality and good service"³²² suggesting value-for-money; on the other hand, 'buy China' is stipulated as a prerequisite for government procurement in the legal framework. It is not easy to reconcile these objectives; it is also in conflict with the basics of the GPA.

³¹⁸ Art. 8 of the Government Procurement Law specifies that the thresholds for government procurement items under the central budget are prescribed and published by the State Council, and the thresholds for items under local budget are prescribed and published by local governments (of provinces, autonomous regions, municipalities), or the department authorised by them.

³¹⁹ Art. 2, Tendering and Bidding Law.

³²⁰ Art. 3, Tendering and Bidding Law.

³²¹ Under Art. 10, Government Procurement Law, exceptions may be possible when domestic goods, works and services are not available, or they cannot be procured on reasonable commercial terms; or when their procurement is for use abroad; or the procurement terms are restricted by other laws or administrative rules.

³²² Art. 17, Government Procurement Law.

Fiscal funds

Using fiscal funds as a trigger for applying procurement rules causes accounting irregularities in public procurement in China, since one has to first agree on the definition. And, this is exactly the source of the problem.

In China, fiscal funds may involve extra-budget revenues or funds owned or collected by government bodies at different administrative levels. Administrative fines collected by government bodies may also be kept as expenditure, which is in fact a source of fiscal funds. Moreover, it is a common practice for government agencies to have at their own disposal some available funds, known as *Small Coffers*, which form only part of the fiscal funds and are thus able to escape from rules, including public procurement rules, applicable to fiscal funds. In general, certain procurement, although meeting the criteria of the threshold and coverage, is able to defy the procurement rules if the source of fiscal funds can be managed under disguise. This may offer part of the explanation as to why the stake of public procurement only accounts for 2.7% of Chinese GDP in 2014.

The problem of accounting irregularities may have prompted the Chinese government to provide a definition of 'fiscal funds' in its Implementing Rules of Government Procurement Law which came into force 12 years after the law was enacted. In effect, rules are now reformed and stricter. Fiscal funds are funds within the budgetary control; also, borrowed funds used as a source of repayment are fiscal funds. When government departments, institutions as well as organisations procure by using a mixture of fiscal and non-fiscal funds, the part of procurement that is financed by using fiscal funds must apply the law as well as its Implementing Rules; if fiscal and non-fiscal funds cannot be divided while procuring, the complete procurement must observe the law and its implementing rules.³²³

Procurement coverage usually refers to entity and thresholds. Within the context of China's Government Procurement Law, covered entities are government departments, institutions and organisations at the level of State Council (i.e. ministries, departments, etc.), provincial, autonomous regions and municipalities. The coverage of China's Government Procurement Law refers to those listed in the Centralised Procurement Catalogue³²⁴ and only for sums above the thresholds. Covered entities, or their procurement agents, at different administrative levels are competent to compile

³²³ Art. 2, Implementing Rules of the Government Procurement Law.

³²⁴ By virtue of Art. 2 of the Government Procurement Law, procurement refers to acquiring goods, works and services by means of contract with consideration, including purchase, lease, proxy and employment, etc. Goods are defined as raw materials, fuel, equipment and products of all forms and types. Works are defined as construction projects, including construction, reconstruction, expansion, renovation, demolition, repair works of buildings and structures. Services are defined as anything except goods and works under the definition of the Government Procurement Law. Further defined by Art. 2 of the Implementing Rules of the Government Procurement Law, services shall include services that are required by the government as well as services that government provides to the public.

their respective Centralised Procurement Catalogue and therefore determine the thresholds, which may indeed appear arbitrary and to lack uniformity.³²⁵

The Implementing Rules of the Government Procurement Law provides a slightly more precise definition concerning procurement catalogue and entity. The aim is to provide a wider coverage. For example, from now on, the Centralised Procurement Catalogue shall include items intended to be procured by centralised procurement agents as well as by departments. As for decentralised procurement, based on the Implementing Rules, it refers to any procurement items that are above the threshold but not listed in the Centralised Procurement Catalogue and which should be procured by covered entities themselves or by procurement agents.³²⁶

Nonetheless, the Implementing Rules refrain from providing precise thresholds and maintain that it should be set by covered entities at different administrative levels.

This description suggests that procuring the same goods, services and works by different entities may fall in or out of the remit of the procurement rules at different administrative levels, as entities may apply different funds in financing their respective procurement, and discretion may be commonplace as entities are entrusted with great autonomy to decide how their procurement items should fit into the centralised or decentralised public procurement lists. Thus, in fact, the procurement regime is fragmented as different or even conflicting conditions or thresholds are imposed by different parties.

For example, while some European companies complain that they fall victim to China's 'buy national' procurement rules, it is noticed that, from 2008, when China started its GPA accession negotiations, until 2016, when the last WTO Trade Policy Review took place, each of the five Reviews by the WTO Secretariat pointed out that foreign products are routinely procured, but no data are given on the value or proportion.³²⁷ This observation confirms the experience of one of the authors with a French bank (Shanghai Office) in the late 1990s in which many Chinese procurement contracts were awarded to French companies, ranging from the Three Gorges project to the Pudong Airport, from coaches for the Shanghai Metro to aircraft purchasing and leasing, from equipment supply to power plants to the architectural design of the Shanghai Grand Theatre. Note that some of the procurement markets were only offered to be opened to foreign companies in China's 4th GPA accession offer submitted in November 2012, such as architectural services. It should not be forgotten that before China's WTO accession, the country was a less-liberalised economy and that foreign

³²⁵ Art. 8, Government Procurement Law.

³²⁶ Art. 4, Implementing Rules of the Government Procurement Law. For procurement items with standardised technologies and services or for routine use, they should be listed as centralised procurement items. Regarding centralised procurement items procured by a department, it permits items to be procured by bulk order with specifications based on the business nature which should be determined by procuring departments or sectors. Art. 3, Implementing Rules of the Government Procurement Law.

³²⁷ For example, it is noted that: "[A]lthough official statistics do not contain data on procurement by foreign suppliers or of foreign products, this appear to occur." WTO Trade Policy Review, Report by the Secretariat, China, WT/TPR/S/300/Rev.1, 7 October 2014, at para 3.182.

companies' chances of acquiring Chinese public procurement contracts were often jeopardised by political incidents, such as a foreign country's selling arms to Taiwan.

Moreover, some Chinese procuring authorities exercise their absolute discretion by simply ignoring procurement rules. For example, the Chinese Supreme Court brought up a case concerning the mishandling of public procurement as typical of the ten sorts of economic mal-administrations in 2015. The case goes back to 2012 and concerns the purchase of high-frequency X-ray radiography equipment for a maternal and child health service located in Shanghai Chongming County. The procurement was commissioned by the Procurement Agent of the County Government, and its tender document required "top brands from Europe or America" with specifications that were in effect in direct violation of the government's procurement policy of 'buy national'.³²⁸ Eventually, the tender was declared void and the bidding result annulled because of the discriminatory nature of the tender term of "top brands from Europe or America".³²⁹

Despite or perhaps because of (as many in China hold) the discretion exercised by procuring authorities in China, the WTO Trade Policy Review noted in its 2014 on China that, despite the "buy national" requirement included in the Government Procurement Law, "... the Chinese government has been implementing a policy to facilitate the procurement of foreign products since 2007."³³⁰

The EU's public procurement directives

The EU as a whole is party to the WTO GPA. Based on the principles of transparency, non-discrimination and competitiveness, a uniform EU public procurement system eradicates non-tariff barriers in the common market and should guarantee open and fair access to procurement goods and services, one of the Union's fundamental freedoms of movement. This also in the interest of member states as they will be able to acquire 'value for money' and efficient use of public funds.

The EU public procurement market is presently governed by Directive 2014/24/EU of 26 February 2014 on public procurement (repealing Directive 2004/18/EC) which is also known as the classical Directive, Directive 2014/25/EU of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors (repealing Directive 2004/17/EC), and Directive 2014/23/EU of 26 February 2014 on the award of concession contracts but only with a value equal to or greater than EUR 5 million, and certain types of concession are excluded from the scope of the directive, including concessions relating to drinking

³²⁸ Art. 10, Government Procurement Law.

³²⁹ However, it's interesting to note that the decision of null and void was reached by virtue of Art. 22.2, instead of Art. 10 (concerning 'buy national'), of the Government Procurement Law that, depending on specific requirements of the procurement, procurers may set restrictions on certain conditions of a specific procurement but they may not impose any unreasonable conditions to differentiate suppliers resulting in discriminatory treatment. (see www.ccgp.gov.cn/zycg/zycgdt/qtbw/201510/t20151027_6040498.htm (Chinese)).

³³⁰ WTO Trade Policy Review, Report by the Secretariat, China, WT/TPR/S/300/Rev.1, 7 October 2014, at para 3.182.

water. On 16 April 2014, Directive 2014/55/EU on electronic invoicing in public procurement was equally adopted. The deadline for transposition in the member states is set for 27 November 2018. Directive 2014/24/EU coordinates procurement of goods, services and works, for which procurement may be undertaken by central government and sub-central contracting authorities, respectively. Thresholds under the classical Directive depend on the kind of procurement items – goods, services or works – as well as on the procuring authority, which are determined by Regulation (EC) 1336/2013. For example, for procurement of works and when the procuring authority is either a central or a sub-central government authority, the threshold is €5,225,000.³³¹ The new EU public procurement package was adopted in 2014 with the aim of simplifying procedures and making them more flexible in order to encourage access to public procurement for SMEs, ensuring the best value for money for public purchases and will respect the EU's principles of transparency and competition and to ensure that greater consideration is given to social, innovative and environmental criteria.³³² Within the remit of the EU public procurement directives, all undertakings, either public or private, are guaranteed participation in procurement tendering, as long as a public undertaking tenderer's participation does not cause any distortion to competition vis-à-vis private undertaking tenderers. With regard to the eligibility of public undertaking tenderers, directly or indirectly subsidised undertakings by the State or other contracting authorities or even by the contracting authority itself may legitimately take part in a tendering.³³³ The criterion that may disqualify a tenderer includes "abnormally low tenders",³³⁴ or when a tenderer violated relevant labour and environmental legislation. For the former, contracting authorities may reject those tenderers if it's proven that they are recipients of illegal state aid.

On the other hand, as the CJEU ruled that the public procurement system should enjoy direct effect, the 28 member states are granted the competence of elaborating on procurement procedures, awarding criteria and evaluation policies. This is intended to achieve harmonisation of "two opposite dynamics": one of a supranational course and another national priorities, for transparent public spending, improved market information and uniform application of objective criteria of participation in tendering and awarding procedures, etc.³³⁵ However, such arrangements sometimes bring about unwanted decentralisation in procedures, requirements and substance that cause costly regulatory heterogeneity among the member states.³³⁶

³³¹ See https://ec.europa.eu/growth/single-market/public-procurement/rules-implementation/thresholds_en.

³³² See https://ec.europa.eu/growth/single-market/public-procurement/rules-implementation_en.

³³³ Case C-94/99, ARGE Gewässerschutz v. Bundesministerium für Land und Forstwirtschaft [2000] E.C.R. I-11037.

³³⁴ Under such circumstances, the CJEU ruled, with direct effect, that contracting authorities should examine the details of the bid before deciding the awarding of the contract and seek from the tenderer explanations as to the bid submitted. Case 76/81, SA Transporoute et Travaux v. Minister of Public Works [1982] E.C.R.I-457.

³³⁵ See Bovis (2005).

³³⁶ See Pelkmans & Correia de Brito (2012).

Within the context of international trade relations, the EU negotiates public procurement agreements with third countries both at bilateral/regional and plurilateral levels. For the former, provisions covering public procurement have been included in free trade agreements with countries such as Mexico, Chili, Canada (CETA), Korea and Vietnam; while on-going negotiations are conducted with ASEAN, Indonesia and Mexico, etc.

Awarding criteria and evaluation policies

Given that supporting social responsibility is an aim of the new EU public procurement system, “social inclusion” as well as “social and labour legislation compliance” have now become awarding criteria, to encourage companies to develop socially responsible products and services. As a result, some of the previous awarding factors, such as “the most economically advantageous offer” approach, considered as a legitimate discretion that contracting authorities might exercise in the past, will no longer be an awarding criterion alone. Instead, the approach has become “best value for money”.

Specifically, contracting authorities will be able to better take social aspects into account on awarding procurement contracts on the basis of the “best price-quality ratio”. That means a contracting authority can choose the tenders that promote gender equality, work-life balance or provide more social advantages, including employing long-term unemployed or disadvantaged persons to perform the contract.

In order to end social dumping, respecting national or EU social and labour rules and all the applicable agreements and international laws is a criterion for contracting authorities to evaluate tenders. Otherwise, tenders may be excluded; while a tender must be rejected when the tender value is abnormally low because the social and labour obligations are not complied with.

The new EU procurement rules have also introduced reserved tendering procedures for the so-called “sheltered workshops” that promote the integration of disadvantaged persons, for all types of procurement of work, services and goods. In the past, such companies might not be able to obtain contracts. Now, contracting authorities will also be able to reserve the right for “sheltered workshops” to participate in award procedures for social services for up to three years.

On the other hand, as part of the overall drive for simplified procedures that the new EU procurement package aims to achieve, the new European public procurement rules will only apply to contracts of social services, such as cultural and health services, above the threshold of €750,000 (compared with €209,000 for other services).

At member states level, and as far as subcontracting is concerned, national contracting authorities must ensure tenders comply with environmental, social or labour law obligations under EU or national rules, or international agreements. This implies that transparency must be ensured throughout the entire subcontracting procedure, from the stage of call for tenders to the performance of the contract; while at the same time a chain of responsibilities may be drawn up when subcontracting subcontractors.

ANNEX III. ESTIMATED IMPACTS OF AN FTA

Table A2. FTA impacts: Output and trade effects per sector in the EU

	Output, % change		Exports, % change		Imports, % change	
	Modest scenario	Ambitious scenario	Modest scenario	Ambitious scenario	Modest scenario	Ambitious scenario
Primary agriculture	0.14	0.26	0.97	1.32	0.61	1.02
Forestry	0.05	0.09	0.46	0.71	0.23	0.16
Fishing	0.15	0.28	0.63	1.03	0.79	1.45
Oil and gas	0.22	0.37	0.60	0.93	1.04	1.63
Other primary energy, mining	0.32	0.58	0.69	1.13	1.01	1.64
Utilities	0.43	0.78	0.59	0.88	0.84	1.40
Construction	0.90	1.62	1.10	1.81	1.44	2.54
Wood, pulp, paper	-0.35	-0.74	0.04	-0.20	0.93	1.32
Non-metallic mineral products	-0.04	0.09	0.72	0.97	2.96	4.21
Primary metals	0.85	1.19	1.29	1.87	1.52	2.13
Fabricated metal products	0.39	0.38	2.06	2.63	3.19	4.77
Other machinery	2.06	2.88	4.83	6.71	3.13	4.59
Electrical machinery	-1.46	-1.76	-0.33	0.37	2.36	4.00
Motor vehicles	2.35	3.23	3.32	4.41	1.77	2.60
Other transport	0.46	1.03	2.38	3.83	2.87	4.16
Other goods	-0.83	-1.64	0.01	-0.56	3.68	6.18
Processed foods	0.13	0.33	0.93	1.33	1.30	1.83
Beverages and tobacco	0.33	0.62	0.48	0.68	0.59	1.00
Textiles	-3.64	-4.85	-2.88	-3.83	1.24	1.38
Apparel	-5.10	-6.58	-4.33	-5.68	5.70	6.98
Leather products	-5.62	-7.31	-4.73	-6.19	3.64	4.25
Paper products, printing	0.38	0.58	0.93	1.40	0.73	1.33
Petrochemicals	0.68	1.04	1.06	1.63	1.09	1.77
Chemicals, rubber, plastics	0.31	0.43	0.83	1.12	0.92	1.40
Wholesale, retail	0.49	0.89	0.94	1.51	0.78	1.42
Air transport	0.64	1.16	1.04	1.77	0.93	1.57
Land transport, other	0.63	0.99	1.29	1.85	1.19	2.04
Maritime transport	1.21	1.84	1.65	2.40	1.14	1.82
Recreational, other services	0.28	0.47	0.58	0.89	0.82	1.36
Communications	0.39	0.70	0.56	0.84	0.73	1.24
Finance	0.32	0.57	0.51	0.80	0.83	1.36
Insurance	0.44	0.79	0.78	1.42	0.80	1.32
Business, ICT services	0.48	0.81	0.78	1.26	0.78	1.27
Public services	0.34	0.68	0.51	0.74	1.12	2.02

Source: Authors' own calculations.

Table A3. FTA impact: Labour displacement, % (based on weighted standard deviation)

	Lower skilled		Medium skilled		Higher skilled	
	Ambitious scenario	Modest scenario	Ambitious scenario	Ambitious scenario	Modest scenario	Ambitious scenario
China	1.77	2.42	1.35	1.85	1.12	1.54
European Union	1.37	1.97	0.79	1.16	0.93	1.35
Austria	1.04	1.40	0.67	0.91	0.83	1.12
Belgium	1.13	1.52	0.74	0.98	0.80	1.07
Cyprus	1.28	1.75	0.79	1.10	0.65	0.91
Czech Republic	1.34	1.88	0.78	1.10	0.96	1.35
Denmark	0.83	1.15	0.48	0.66	0.59	0.81
Estonia	1.20	1.72	0.62	0.90	0.87	1.25
Finland	1.71	2.31	0.65	0.88	1.27	1.71
France	0.96	1.38	0.62	0.89	0.75	1.07
Germany	2.01	2.72	1.37	1.86	1.41	1.91
Greece	0.92	1.29	0.54	0.76	0.55	0.77
Hungary	1.62	2.32	0.83	1.20	1.16	1.66
Ireland	0.84	1.22	0.43	0.62	0.55	0.79
Italy	1.49	2.09	0.89	1.25	1.02	1.43
Latvia	1.20	1.68	0.68	0.96	0.76	1.06
Lithuania	0.92	1.29	0.51	0.69	0.58	0.80
Luxembourg	0.90	1.26	0.32	0.45	0.39	0.55
Malta	3.99	7.90	2.62	5.80	2.75	5.68
Netherlands	0.95	1.49	0.70	1.09	0.47	0.74
Poland	1.21	1.66	0.72	0.98	0.79	1.08
Portugal	1.50	1.99	0.67	0.89	0.79	1.05
Slovakia	3.67	4.79	2.13	2.77	2.31	3.01
Slovenia	1.26	1.74	0.78	1.07	1.07	1.48
Spain	0.99	1.37	0.42	0.58	0.67	0.93
Sweden	0.88	1.20	0.46	0.62	0.66	0.88
UK	1.12	1.51	0.68	0.91	0.94	1.26
Bulgaria	1.30	1.73	0.56	0.75	0.86	1.14
Croatia	0.78	1.07	0.57	0.78	0.70	0.96
Romania	1.35	1.80	0.86	1.15	0.94	1.27

Source: Authors' own calculations.

ANNEX IV. TOTAL AVEs FOR NTBs FOR GOODS AND SERVICES

Table A4 presents the estimates of the costs, in %, that is, as AVEs, of total Non-Tariff Measures between China and the EU. As chapter 18 explains, the methods of arriving at these AVEs are different between goods and services. For goods, the total trade costs are derived from the gravity analysis presented in Annex V. In order to get the results of Table 18.2 – still for goods – ‘actionability rate estimates’ have been applied to the results of the gravity analysis. This means that the estimates, dating back to ECORYS (2009), have been applied to goods: if ‘actionability’ of the costs of a NTM is (say) 50%, the total AVE could be (say) 34% and the actionable AVE is 17%. Actionability can only be ‘guesstimated’ in a rough manner by experts, certainly if the empirical analysis has to be delivered ahead of the negotiations (which might provide greater clarity on ‘actionability’). For services, as noted, the source (Jafari & Tarr, *op. cit.*, based on World Bank data), provides only non-discriminatory AVEs. The main text in chapter 18 emphasises that non-discriminatory NTMs can be just as costly – they might even imply import bans, sometimes – but, under WTO rules and in many FTAs, they might not be considered ‘actionable’. The principal reason is likely to be a trading partner’s “right to regulate”, that is, its regulatory ‘sovereignty’. The country is free to stick to its regulation, if non-discriminatory. The source of Jafari & Tarr, *op. cit.*, does not comprise non-discriminatory NTMs in services, hence, the total AVE costs cannot be calculated. As a rough proxy, the services AVEs, as listed here in Table A-4, have been recalculated from the ones in Table 18.2, *as if* the latter had been derived from total AVEs, subsequently subjected to the actionability rates found in ECORYS (2009). Once one assumes that derivation, it is easy to trace the total AVEs in services. These are the total AVEs for services, listed below in Table A4. Therefore, by definition, these total AVEs in services are rough proxies, simply because the total set of services restrictions (discriminatory and non-discriminatory) rendering market access in services to China and to the EU so costly, are not available. Only non-discriminatory ones are.”

Table A4. Total AVEs for NTBs for goods and services

	CHN total AVEs on EUN	EUN total AVEs on CHN	EUN exports to CHN, mill USD	CHN exports to EUN, mill USD
Primary agriculture	73.6	81.0	1,640.8	2,757.3
Forestry	73.6	81.0	371.6	65.7
Fishing	73.6	81.0	49.9	42.0
Oil and gas	0	0	3.8	0.3
Other primary energy, mining	0	0	2,513.9	983.2
Utilities	30.1	14.4	82.2	259.5
Construction	33.4	16.0	1,769.9	1,977.5
Wood, pulp, paper	8.5	22.5	1,381.2	12,649.3
Non-metallic mineral products	8.5	22.5	1,307.3	6,833.2
Primary metals	16.2	20.6	14,195.5	9,756.8
Fabricated metal products	16.2	20.6	4,365.1	15,090.7
Other machinery	15.9	8.8	69,333.4	74,812.2
Electrical machinery	20.2	11.2	7,582.6	93,311.7
Motor vehicles	94.0	57.4	37,105.3	4,802.8
Other transport	15.9	8.8	9,938.6	9,554.6
Other goods	27.8	38.5	1,517.0	27,208.9
Processed foods	32.5	29.8	2,567.3	5,405.0
Beverages and tobacco	266.3	176.2	2,044.2	107.1
Textiles	27.8	38.5	2,211.5	21,997.8
Apparel	27.8	38.5	906.9	36,434.9
Leather products	27.8	38.5	1,363.3	18,630.3
Paper products, printing	27.8	38.5	4,484.2	3,238.7
Petrochemicals	55.3	57.4	489.2	2,092.2
Chemicals, rubber, plastics	26.5	29.8	25,826.6	28,421.0
Wholesale, retail	12.0	2.7	10,130.6	7,284.1
Air transport	117.9	27.3	1,628.2	3,288.8
Land transport, other	0.0	42.4	2,446.7	3,633.6
Maritime transport	91.9	13.5	353.1	8,723.9
Recreational, other services	38.3	18.4	718.3	1,245.1
Communications	11.0	3.0	596.7	662.4
Finance	42.1	3.3	227.4	284.8
Insurance	42.2	22.1	2,776.5	518.5
Business, ICT services	88.7	44.5	7,544.6	5,818.2
Public services	30.1	14.4	546.5	1,614.3
Total trade weighted	25.7	26.3		
Goods	36.7	22.8		
Services	43.5	20.9		

Data source: Own estimates (see annex and text), World Bank, and EUROSTAT.

ANNEX V. TECHNICAL OVERVIEW FOR CGE MODELLING

This annex provides an overview of the modelling exercise summarised in the main body of the study. In the computational model, the “whole” economy, for the relevant aggregation of economic agents, is modelled simultaneously. This means that the entire economy is classified into production and consumption sectors. These sectors are then modelled collectively. Production sectors are explicitly linked together in value-added chains from primary goods, through higher stages of processing, to the final assembly of consumption goods for households and governments. These links span borders as well as industries. The link between sectors is both direct, such as the input of steel into the production of transport equipment, and also indirect, as with the link between chemicals and agriculture through the production of fertilizers and pesticides. Sectors are also linked through their competition for resources in primary factor markets (capital, labour and land). The data structure of the model follows the GTAP database structure, and basic models of this class are implemented in either GEMPACK or GAMS (Hertel, 1997; Hertel et al., 1997; Rutherford & Paltsev, 2000). At its core, the GTAP database is a multi-region input output (MRIO) database supplemented with data on taxes and emissions, and organised as a form of balanced social accounting matrix. We work here with a GEMPACK implementation of our model. The model itself is an extension of the basic GTAP-based multi-sector model of production and trade, extended for implementation of the Eaton-Kortum (2002) or EK model. A full discussion of the mathematical implementation of the EK structure of the model is detailed in Bekkers & Francois (2015). To fit our global data to the theoretical model, following Egger & Nigai (2015) and Bekkers et al. (2015), total trade costs and technology parameters are fit from actual import shares (calibration), imposing that there is a perfect fit between actual and predicted normalised trade shares and that income is equal to exports to all destination countries. Changes in trade costs (the CGE experiments themselves) follow from gravity-based estimates of trade costs as discussed below, where the gravity specification is also based on the EK structure (see Bekkers et al., 2015, for a discussion).

1. *Production*

An algebraic version of the GE system is summarised in Equation Tables A5 and A6. We start here with a representative production technology. Assume that output q_j in sector j can be produced with a combination of intermediate inputs z^j and value-added services (capital, labour, land, etc.) va^j . This is formalised in equation 1. Assuming homothetic cost functions and separability, we can define the cost of a representative bundle of intermediate inputs z^j for the firm producing q^j and similarly the cost of a

representative bundle of value-added services va^j . These are shown in equations 2 and 3. They depend on the vector of composite goods prices \tilde{P} and primary factor prices ω . Unit costs for q then depend on the mix of technology and prices embodied in equations 1, 2 and 3. We represent this in equation 4, which defines unit cost ζ^j . In the absence of taxes, in competitive sectors ζ^j represents both marginal cost and price. On the other hand, with imperfect competition on the output side (discussed explicitly later) ζ^j can be viewed as measuring the marginal cost side of the optimal mark-up equation, with mark-ups driving a wedge between ζ^j and P^j .

To combine production technologies with data, we need to move from general to specific functional forms. We employ a nested CES function, with a CES representation of value added activities va^j , a CES representation of a composite intermediate z^j made up of intermediate inputs, and an upper CES nest that then combines these to yield the final good q^j . Our set-up is based on the assumption we have i primary factors v , as well as n production sectors that can be represented in terms of composite goods \tilde{q} as defined below. These composites may (or may not, depending on the goods involved) be used as intermediate inputs. In Equation Table A5, we have also shown the CES substitution elasticity for intermediate inputs ϕ , the substitution elasticity for value added σ , and the substitution elasticity for our "upper nest" aggregation of value added and intermediates, ψ . In the absence of taxes, total value added Y will be the sum of primary factor income, as in equation 5.

Given our assumption of CES technologies, we can represent value added in sector j as a function of primary inputs and the elasticity of substitution in value added σ^j . This yields equation 6, and its associated CES price index shown in equation 7. Similarly, we can specify the CES price index for composite intermediates, as in equation 7. This gives us equation 8, where the coefficient ϕ^j is the elasticity of substitution between intermediate inputs. This is assumed to be Leontief (i.e. $\phi^j = 0$). Finally, following Equation Table A5, we will also specify an aggregation function for value added and intermediate inputs, in terms of its CES price index. This is shown as equation 9. From the first order conditions for minimising the cost of production, we can map the allocation of primary factors to the level of value added across sectors. This is formalised in equation 10. We can also specify the total demand for composite intermediate goods across sectors $\tilde{q}^{int,i}$ as a function of the producer price of composite input price P_{z^j} in each sector, the scale of intermediate demand across sectors z^j , and prices of composite goods \tilde{P}_i . This is shown in equation 11. Finally, with the upper nest CES for goods we can also map value added va^j and intermediate demand z^j in terms of equations 7 and 8, output q^j and the elasticity of substitution ψ^j between inputs and value added. This yields equations 12 and 13, where the terms γ are the CES weights (similar to those in equation 6) while ψ^j is the upper nest elasticity of substitution in the production function.

We define the price of output at industry level as in equation 14. In this case, ζ^j is defined by equation 9 and represents the price of a bundle of inputs, and equation 14 follows directly from average cost pricing and homothetic cost functions. (It can also accommodate Dixit-Stiglitz-type monopolistic competition, and the EK model. See Francois, Manchin, and Martin, 2013 and Bekkers & Francois, 2015 for explicit derivations.)

Together, equations 1 through 14 map out the production side of the economy. For an open economy, given resources, technology (represented by technical coefficients in the CES functional forms), and prices for foreign and domestic goods and services, we can determine factor incomes, national income and the structure of production. We close this system by discussing the demand side of the economy and basic open-economy aspects in the next sections.

The reader will have noted that we are working with CES-based demand equations, both for intermediate and final demand. In point of fact, this basic functional form for demand serves as reduced form for demand in the Armington model, various versions of trade under monopolistic competition, and the Eaton-Kortum model. The key difference is in the parameterisation of the model itself and the interpretation of results. With monopolistic competition, it is necessary to add side equations reflecting supply- (and sometimes demand-) side externalities linked to variety effects. In the Eaton-Kortum model, the reduced form trade equation is actually the same as the Armington model (i.e. CES in form), although the parameterisation is then different. See Bekkers & Francois (2015) and Francois, Manchin and Martin (2013) for formal derivations.

Table A5. Definition of the Basic CGE Framework

$$\begin{aligned}
 (1) \quad q^j &= f^j(z^j, \text{va}^j) \\
 (2) \quad P_z &= g(\tilde{P}) \\
 (3) \quad P_{\text{va}} &= h(\omega) \\
 (4) \quad \zeta_j &= c(P_z, P_{\text{va}}) \\
 (5) \quad Y &= \sum_i \omega_i v_i \\
 (6) \quad \text{va}_j &= \left[\sum_i \alpha_{ij} v_{ij} \frac{\sigma^j - 1}{\sigma^j} \right]^{\frac{1}{\sigma^j - 1}} \\
 (7) \quad P_{v,j} &= \left[\sum_i \alpha_{ij}^{\sigma^j} \omega_i^{1 - \sigma^j} \right]^{\frac{1}{1 - \sigma^j}} \\
 (8) \quad P_{z^j} &= \left[\sum_i \beta_{ij}^{\phi_j} \tilde{P}_i^{1 - \phi_j} \right]^{\frac{1}{1 - \phi_j}} \\
 (9) \quad P_j &= \left(\gamma_{vj}^{\psi_j} P_{\text{va}^j}^{1 - \psi_j} + \gamma_{zj}^{\psi_j} P_{z^j}^{1 - \psi_j} \right)^{\frac{1}{1 - \psi_j}} \\
 (10) \quad v_i &\geq \sum_j \text{va}^j \left(\frac{\alpha_{vj}}{\omega_i} \right)^{\sigma^j} P_{\text{va}^j} \\
 (11) \quad \tilde{q}^{\text{int},i} &= \sum_j z^j \left(\frac{\beta_{ij}}{\tilde{P}_i} \right)^{\phi_j} P_{z^j} \\
 (12) \quad \text{va}^j &= q^j \left(\frac{\gamma_{vj}}{P_{v,j}} \right)^{\psi_j} P_j \\
 (13) \quad \tilde{z}^j &= q^j \left(\frac{\gamma_{zj}}{P_{z^j}} \right)^{\psi_j} P_j \\
 (14) \quad P_j &= q_j^{\psi_j} \left(\gamma_{vj}^{\psi_j} P_{\text{va}^j}^{1 - \psi_j} + \gamma_{zj}^{\psi_j} P_{z^j}^{1 - \psi_j} \right)^{\frac{1}{1 - \psi_j}} \\
 &\text{where } 1 > \psi > 0 \\
 (15) \quad P_{U^c} &= \left(\sum_{i=1}^n \alpha_{c,i}^{\eta^c} \tilde{P}_i^{1 - \eta^c} \right)^{\frac{1}{1 - \eta^c}} \\
 &\text{where } 0 < \frac{\eta^c - 1}{\eta^c} < 1 \\
 (16) \quad U^c &= \left(\sum_{i=1}^n \alpha_{c,i}^{\eta^c} \tilde{P}_i^{1 - \eta^c} \right)^{\frac{1}{1 - \eta^c}} = Y \theta^c \\
 (17) \quad U^c &= \left(\sum_{i=1}^n \alpha_{c,i}^{\eta^c} \tilde{P}_i^{1 - \eta^c} \right)^{\frac{1}{\eta^c - 1}} Y \theta^c \\
 (18) \quad \tilde{q}^{c,i} &= U^c P_{U^c}^{\eta^c} \alpha_{c,i}^{\eta^c} \tilde{P}_i^{-\eta^c} \\
 (19) \quad P_{U^g} &= \left(\sum_{i=1}^n \alpha_{g,i}^{\eta^g} \tilde{P}_i^{1 - \eta^g} \right)^{\frac{1}{1 - \eta^g}} \\
 &\text{where } 0 < \frac{\eta^g - 1}{\eta^g} < 1 \\
 (20) \quad U^g &= \left(\sum_{i=1}^n \alpha_{g,i}^{\eta^g} \tilde{P}_i^{1 - \eta^g} \right)^{\frac{1}{1 - \eta^g}} = Y \theta^g \\
 (21) \quad U^g &= \left(\sum_{i=1}^n \alpha_{g,i}^{\eta^g} \tilde{P}_i^{1 - \eta^g} \right)^{\frac{1}{\eta^g - 1}} Y \theta^g \\
 (22) \quad \tilde{q}^{g,i} &= U^c P_{U^c}^{\eta^g} \alpha_{g,i}^{\eta^g} \tilde{P}_i^{-\eta^g} \\
 (23) \quad \left(\sum_{j=1}^n \alpha_{I,j} \tilde{P}_j \right) &= Y \theta^I \\
 (24) \quad \omega_k &= P^c (\rho + \delta) \\
 (25) \quad dK/K &= dI/I \\
 (26) \quad \tilde{P}_j &= \left(\sum_{r=1}^R l_{r,j}^{s_j} P_{r,j}^{1 - s_j} \right)^{\frac{1}{1 - s_j}} \\
 &\text{where } 0 < \frac{s^j - 1}{s^j} < 1 \\
 (27) \quad D_j &= (\tilde{q}^{c,j} + \tilde{q}^{l,j} + \tilde{q}^{g,j} + \tilde{q}^{\text{int},i}) \tilde{P}_j^s b_{h,j}^s P_{h,j}^{-s} \\
 (28) \quad M_j &= D_j - q_j \\
 (29) \quad \left(\sum_{r=1}^{rr} M_{r,j} \right) &= 0 \\
 (30) \quad \left(\sum_j \sum_{r \neq h} P_{r,j} M_{r,h,j} \right) &= B_h \\
 (31) \quad \left(\sum_r B_r \right) &= 0
 \end{aligned}$$

Table A6. Table of key variables

q^j	quantity produced in sector j
z^j	quantity of intermediates used in sector j
va^j	value added used in sector j
P_z	vector or prices of intermediate input bundles z^j
P_{VA}	vector or value-added bundles va^j
ζ_z	vector or prices of output q^j
Y	factor income
P_j	price of composite basket for sector j
ω_i	vector or factor prices
v_i	vector or factor supply
θ	expenditure shares
U^c	level of utility from private consumption
U^g	level of utility from public consumption
D_j	domestic absorption
P_{U^c}	price of utility from private consumption
P_{U^g}	price of utility from public consumption
M_j	imports
δ	rate of time discount
ϕ^j	elasticity of substitution between intermediate inputs
σ^j	elasticity of substitution in value added
ψ^j	elasticity of substitution between intermediate inputs and value added
s^j	elasticity of substitution in consumption
B	balance of payments

2. *Final Demand*

In the system we have spelled out so far, we have mapped the basic, national structure of production. We close the system with a demand specification for a representative household. This involves allocation of regional income by the household to composite consumption H , which is separated over private consumption C , public consumption G , and investment I . Each of these components of H involves consumption of composite goods and services \tilde{q} indexed by sector j . Where we assume fixed expenditure shares (i.e. with H taking a Cobb-Douglas functional form), then we also have a fixed savings rate. Otherwise, given the equilibrium allocation of household income to consumption and investment, we will denote these expenditure shares by θ . We maintain a fixed-share allocation between public and private consumption. This corresponds to public spending as a fixed share of total national income.

We assume a well-defined CES utility function for personal consumption defined over goods \tilde{q} . From the first order conditions for utility maximisation, we can then derive the price of utility from private consumption P_U as a function of prices \tilde{P} , as in equation 15. The corresponding expenditure function is then $U = U^c P_U$ where U^c is the level of utility from private consumption. Taking national income as our budget constraint, then combining equation 5 with the expenditure function yields equation 16. From 16, we can define U^c from the expenditure function and income, as in equation 17. Consumption quantities, in terms of composite goods, can be recovered from equation 17, as shown in equation 18. Like private consumption, the public sector is also modelled with a CES demand function over public sector consumption. This implies equations 19-22.

For investment demand, in the short run, we assume a fixed savings rate. In the long-run, the model can alternatively incorporate a fixed savings rate, or a rate that adjusts to meet steady-state conditions in a basic Ramsey structure with constant relative risk aversion (CRRA) preferences. We employ the fixed savings (recursive dynamics) version here. (Francois, McDonald and Nordstrom 1996, 1999). With fixed savings, and assuming a Leontief composite of investment goods that make up the regional investment good, investment demand is defined by equation 23. With CRRA preferences, steady-state conditions imply equation 24 as well, related to the price of capital ω_k . Where 24 holds, the additional equation allows us to make the savings rate coefficient θ^I endogenous. In equation 24 ρ is the rate of time discount and δ is the rate of depreciation. With a short-run or static closure, investment demand means we apply equation 23. With a long-run closure, we also apply equation 25. With a fixed savings rate, we drop equation 24 and make θ^I exogenous. This is the case here.

3. *Cross-border linkages and taxes*

Individual countries, as described by equations 1-25 above, are linked through cross-border trade and investment flows. With either monopolistic competition or Armington preferences, we can define a CES composite good \tilde{q} in terms of foreign and domestic goods. The price index for this composite good is defined by equation 26. Given equation 26 and the envelope theorem, we can define domestic absorption D as in

equation 27, where h indexes home prices and quantities. The difference between production q_j and domestic absorption D_j in equilibrium will be imports (where a negative value denotes exports), as in equation 28. Across all countries indexed by r , we also have a global balanced trade requirement, shown in equation 29. Similarly, balancing the global capital account also requires equations 30 and 31 (where we now index source r and home destination h). In the short-run it is somewhat standard to fix B , while in the long-run this is sometimes made endogenous (see Hertel, 1997, Chapter 2, and Francois, McDonald & Nordstrom, 1996, 1999).

The basic system outlined above provides the core production and demand structure of each region, as well as the basic requirements for bilateral import demand, global market clearing for traded goods and services, and global capital account balancing. Within this basic structure, we also introduce taxes, transport services and non-tariff barriers. These combine to drive a wedge between the ex-factory price originating in country r and the landed prices in country h inclusive of duties, transport costs, and other trade costs. Taxes and rent-generating trade costs mean that Y is also inclusive of tax revenues and rents. All of this adds additional complexity to the system outlined above, but the core structure remains the same.

4. *Experiment definitions and source data*

As noted in the main text, tariff data come from the WITS database (in turn coming from the UNCTAD TRAINS database and WTO integrated database). Our NTB estimates come from two sources. For services trade policy, we require a measure of applied rates. There are two recent sources of data on services policy, both reflecting massive institutional effort. The OECD has recently released its services trade restriction index for 40 countries (Geloso Grosso et al., 2015), while the World Bank has conducted a similar exercise for 103 countries (Borchert, Gootiiz & Mattoo, 2011, 2014). The World Bank also provides a breakdown of applied policies vs GATS commitments for the 103 countries in the database (Borchert, Gootiiz & Mattoo, 2011), while the OECD has just released a preliminary version of its own data from a similar exercise for the OECD countries (Miroudot & Pertel, 2015). The World Bank has also released recent estimates of trade costs, expressed as tariff equivalents, for all 103 countries in the database (Jafari & Tarr, 2015). We work here with data from the World Bank, as they provide direct estimates of actionable (i.e. discriminatory) trade costs for services.

For goods, we work with gravity-based estimates of total trade costs, adjusted by actionability rates from ECORYS (2009). The approach for specifying our gravity equation is similar to Egger et al. (2015) and Bekkers et al. (2015), and here we include domestic absorption (trade with self). Following our basic gravity regressions, we then recover total trade costs from the importer and exporter fixed effects. If we start with a gravity equation for CES-type import demand for sector v of the form

$$(32) \quad \ln q_{i,j,v} = \ln A_{i,v} + \ln B_{i,j,v} + \ln C_{j,v} = a_{i,v} + b_{i,j,v} + c_{j,v}$$

where $a_{i,v}$ is an exporter fixed effect, $c_{j,v}$ is an importer fixed effect, and $b_{i,j,v}$ represents pair-wise terms, we can show that

$$(33) \quad c_{j,v} = \ln D_{j,v} - a_{j,v} - \sigma \ln T_{j,v}$$

where $\ln D_{j,v}$ is the log value of domestic absorption, σ is the trade price elasticity, and $T_{j,v}$ is the log of the general level of trade costs. Rearranging

$$(34) \quad \ln T_{j,v} = \sigma^{-1}(\ln D_{j,v} - a_{j,v} - c_{j,v}).$$

Our gravity regressions are reported in Table A7, based on the bilateral trade data in our model (year 2011) as well as domestic absorption. Corresponding NTM estimates for the EU and China are reported in the main text (where the EU value is an average of individual MS values). Data sources are described in Bekkers et al. (2015). The price elasticity is based on a combination of tariffs and shipping cost margins.

Table A7. Poisson quasi-maximum likelihood gravity estimates

	All goods	Beverages and Tobacco	Chemicals, Rubber, Plastics	Electrical Machinery	Metals
Price elasticity	-5.036 (5.39)***	-1.763 (3.66)***	-5.441 (5.42)***	-14.091 (5.02)***	-7.911 (6.23)***
ln(distance)	-0.494 (12.02)***	-0.487 (5.59)***	-0.552 (11.33)***	-0.248 (2.48)**	-0.414 (8.73)***
Political Economy 1	0.125 (5.63)***	-0.224 (4.90)***	-0.002 -0.07	0.249 (6.41)***	0.05 (2.08)**
Political Economy 2	-0.111 (4.32)***	0.063 -1.08	-0.197 (5.76)***	-0.096 (1.91)*	0.069 -1.2
Common Colony	0.466 (3.19)***	0.285 -1.41	-0.144 -0.87	0.794 (2.50)**	0.234 -0.85
Common Ethnic Language	0.24 (3.05)***	0.365 (3.10)***	0.305 (2.82)***	0.594 (3.80)***	0.303 (2.89)***
Common Border	0.631 (8.44)***	0.37 (2.35)**	0.424 (4.30)***	0.503 (3.79)***	0.866 (9.18)***
Former Colonial Relationship	0.284 (3.07)***	0.812 (5.08)***	0.226 -1.46	0.176 -1	0.482 (3.36)***
Shallow PTA	0.057 -0.3	-0.533 (1.91)*	0.322 (1.67)*	0.617 (1.80)*	0.48 (2.90)***
Medium PTA	-0.206 -1.22	0.203 -0.87	-0.199 -0.98	0.112 -0.31	0.022 -0.1
Deep PTA	1.189 (5.49)***	1.785 (4.00)***	0.903 (3.57)***	1.527 (4.28)***	0.948 (3.82)***
EUN	0.583 (4.23)***	0.878 (3.14)***	0.345 (1.94)*	1.07 (3.53)***	0.338 (1.98)**
N	11,863	11,863	11,863	11,863	11,863
pseudo R2	0.9353	0.9875	0.9767	0.9621	0.9789

* p<0.1; ** p<0.05; *** p<0.01

Table A7, cont. Poisson Quasi-Maximum Likelihood gravity estimates

	Motor Vehicles	Other Goods	Other (non- electrical) Machinery	Primary Agriculture	Primary Energy
Price elasticity	-3.938 (3.25)***	-4.989 (5.45)***	-15.204 (8.04)***	-2.922 (3.05)***	-3.237 (3.75)***
ln(distance)	-0.103 -1.3	-0.403 (7.22)***	-0.055 -0.69	-0.484 (6.62)***	-0.825 (7.75)***
Political Economy 1	-0.018 -0.38	0.177 (6.01)***	0.124 (3.74)***	0.155 (4.36)***	0.152 (5.13)***
Political Economy 2	-0.091 (1.99)**	-0.016 -0.45	-0.122 (3.43)***	0.064 -1.13	-0.131 (1.97)**
Common Colony	-0.199 -0.56	0.436 -1.22	0.289 -1.37	-0.107 -0.61	0.094 -0.3
Common Ethnic Language	0.171 -1.23	0.25 (2.14)**	0.391 (3.38)***	0.498 (4.76)***	0.452 (2.37)**
Common Border	0.79 (5.91)***	1.052 (10.38)***	0.792 (6.78)***	0.877 (5.09)***	0.559 (2.21)**
Former Colonial Relationship	-0.238 -1.23	0.323 (2.84)***	0.408 (3.09)***	0.215 (1.82)*	0.879 (3.67)***
Shallow PTA	0.633 (2.02)**	0.583 (2.25)**	1.589 (5.44)***	-0.104 -0.42	-1.252 (1.98)**
Medium PTA	1.293 (5.72)***	-0.039 -0.23	0.202 -1.06	0.484 (2.64)***	0.729 (2.45)**
Deep PTA	2.882 (10.30)***	1.398 (4.39)***	2.1 (6.35)***	2.764 (9.14)***	1.152 (2.95)***
EUN	1.834 (8.98)***	0.782 (4.87)***	0.593 (2.88)***	1.541 (7.82)***	0.088 -0.25
N	11,863	11,863	11,863	11,863	11,863
pseudo R2	0.9772	0.9851	0.9768	0.9856	0.9375

* p<0.1; ** p<0.05; *** p<0.01

Source: Authors' own calculations.

Table A7, cont. Poisson Quasi-Maximum likelihood gravity estimates

	Processed Foods	Petro-chemicals
Price elasticity	-5.727 (8.75)***	
ln(distance)	-0.406 (11.15)***	-0.651 (10.37)***
Political Economy 1	0.044	0.011
	-1.63	-0.41
Political Economy 2	-0.038	0.024
	-1.13	-0.43
Common Colony	-0.09	0.368
	-0.35	(1.82)*
Common Ethnic Language	0.372	0.435
	(4.64)***	(3.51)***
Common Border	0.946	0.444
	(11.29)***	(3.04)***
Former Colonial Relationship	0.173	0.378
	(1.86)*	(2.26)**
Shallow PTA	1.221	0.252
	(5.03)***	-1.04
Medium PTA	0.179	0.441
	-1.52	(2.32)**
Deep PTA	1.659	2.154
	(9.30)***	(7.58)***
EUN	0.946	0.353
	(6.65)***	(1.84)*
<i>N</i>	11,863	5,857
pseudo R2	0.9881	0.9797

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' own calculations.

5. Macroeconomic baseline

Before implementing our experiment, we define a benchmark or baseline year. The GTAP data are benchmarked to 2011. We have projected GDP levels (on a PPP level) to 2030, and also implemented within the model a number of recently signed agreements. This includes TPP, TTIP, EU-Singapore, EU-Canada, and EU-Korea. This provides the baseline on which experiments are then run.

6. Sectoring scheme

The basic sectoring scheme for the CGE model is spelled out in the main text.

This CEPS book comprises a first-ever economic and regulatory analysis of a possible Free Trade Area (FTA) between the EU and China, whose design aims to be ‘deep and comprehensive’. It provides an overview of the global economic environment in which EU-Chinese economic relations have developed in recent years, including global value chains linking the two economies. The substance of the FTA design is then elaborated in nine, largely empirical and technical chapters ranging from tariff analysis (at the 6- and 8-digit level) and technical barriers to trade, services, government procurement and investment. A third part comprises a CGE-model-based empirical simulation of the economic effects on GDP per member state (and on China), bilateral trade in goods and services, wages for workers with three distinct skill levels and a series of goods and services sectors.

The year-long study was led by Jacques Pelkmans of CEPS, and the research was carried out by a team of trade specialists at CEPS in partnership with another team of researchers led by Prof. Joseph Francois of the World Trade Institute (WTI) in Bern.

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