

The divestment-reinvestment sequence in foreign countries: The role of relational vs. transactional ownership

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ARTICLE INFO

Keywords:

Relational vs. transactional ownership
Divestment-reinvestment sequence
Family-owned firms
State-owned firms
Escalation of commitment

ABSTRACT

In this paper, we claim that ownership is a key determinant of the firms' divestment-reinvestment sequence in a foreign country. Building on the notion of 'relational vs. transactional ownership', we distinguish between relational-type firms (namely, family-owned and state-owned firms), and transactional-type firms (privately non-family-owned firms). We argue that relational-type firms are less likely to both divest from, and reinvest in, a given foreign country. In fact, relational owners set a lower performance threshold of intervention than transactional ones; additionally, in order to turn the tide, the former often increase resource injection when subsidiary performance falls below the threshold. Such an escalation of commitment increases sunk costs and further decreases the likelihood of divesting the subsidiary. Moreover, when a divestment occurs, the memory of high sunk costs incurred reduces the propensity to reinvest in the same host country. We test our conceptual framework on a large sample of investments, divestments and subsequent re-entries undertaken in the period 2000–2015 by 602 Italian firms. Our econometric findings corroborate our hypotheses, thus contributing to the literature on the interdependencies between divestment and reinvestment choices, and their relationships with corporate ownership.

1. Introduction

Steady growth in foreign countries is a challenge for all firms operating abroad. They operate in unfamiliar environments and suffer from liability of foreignness and outsidership that can undermine and dissolve their competitive advantage (Johanson and Vahlne, 2009). Therefore, firms walk a rough path, through trials and experiences of success and failure involving successions of entries, divestments and reinvestments in host countries. With few exceptions (e.g., Bernini et al., 2016; Procher and Engel, 2018), international business scholars have so far underestimated the interdependencies between these processes focusing instead either on divestment (for recent reviews, see Arte and Larimo, 2019; Schmid and Morschett, 2020) or re-entry in the foreign country (Sousa et al., 2021 for a recent review).

In this paper, we study firm divestments from a foreign country and subsequent reinvestments in the same country as interrelated choices. We claim that corporate ownership not only influences international expansion strategies (Bhaumik et al., 2010; Singla et al., 2017), but it is also a key determinant of the divestment-reinvestment sequence. Specifically, we rely on the distinction between relational and transactional owners to investigate the effects of ownership on management decisions. Aguilera and Crespi-Cladera (2016, p. 53) refer to "relational owners as long-term shareholders with complex performance goals, such as profits and growth",

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and who “have other relationships with those firms that yield benefits. Classic relational owners would be families or the state”, while “transactional owners lack any relationships with the firms in which they have ownership except obtaining returns”. Accordingly, we distinguish firms in the following three categories: privately (non-family) owned firms, which are *transactional-type firms*; family-firms, and state-owned firms, both of which are *relational-type firms*, although with different levels of owner’s relationality.

By relying upon the literature on ownership heterogeneity, we argue that relational ownership, as opposed to transactional ownership, decreases a firm’s propensity to both divest from, and reinvest in a given foreign country after a local failure. In fact, relational owners not only set a lower performance threshold below which they decide to intervene to deal with the underperforming foreign subsidiary (Gimeno et al., 1997), but when such a threshold is reached they often try to reverse the situation by investing more resources. Such an escalation of commitment increases sunk costs and make the divestment even less likely (Kuiken et al., 2020).¹ Moreover, once a failure divestment has occurred, the memory of high sunk costs makes it less likely that the relational owner will reinvest in the same host country. In other words, sunk costs act as both a barrier to exit the foreign market, and a barrier to re-entry therein (Baumol et al., 1982). This link between sunk costs incurred before divestment and the expected sunk costs after reinvestment is the mechanism that creates the sequential interdependence along the divestment-reinvestment sequence.

Our empirical study relies on a large sample of foreign investments undertaken by 602 Italian firms (2421 foreign investments in 92 different countries), followed by divestment (294 divestments, of which 157 foreign subsidiary shutdowns and 137 foreign subsidiary sales in the market for corporate control) and subsequent re-entries (79 reinvestments) throughout the 2000–2015 period. Using a two-step model that jointly considers the decision to shut down a foreign subsidiary, and the decision to reinvest later in the same country, we find that relational ownership has a negative effect first on the likelihood of failure divestment, and - once divested - also on the probability of reinvesting in the same country.

The paper provides the following contributions. Our study is among the first that considers the interdependencies between exit (divestment) and re-entry (reinvestment) through FDI, i.e., an entry mode that involves high commitment of human and financial resources. Indeed, while some case studies have been published recently (e.g., Dominguez and Mayrhofer, 2017; Aguzzoli et al., 2021) we rely on a large longitudinal sample of firms. Our findings confirm the relevance of corporate ownership as a key determinant of the divestment-reinvestment sequence along the internationalization path of modern firms in the global business environment (Aguilera and Crespi-Cladera, 2016; Bhaumik et al., 2010, 2017).

By proposing a consistent conceptual framework that relates the internationalization decision-making processes to different relational vs. transactional ownership characteristics, this paper also responds to the call for further research on the role of firm heterogeneity (Aharoni et al., 2011; Contractor et al., 2019; Surdu et al., 2021). In particular, by distinguishing relational-type firms into family-owned firms and state-owned firms, we show how their different propensities to divest and reinvest depend on specific forms of owner commitment (affective, calculative and normative). In this way, our results complement the literature on the internationalization of these two categories of firms, which is still focused mainly on their expansion rather than divestment and reinvestment choices (Wang et al., 2012; Rodrigues and Dieleman, 2018; Mariotti and Marzano, 2019; Arregle et al., 2021).

The remainder of the paper is structured as follows. First, we develop our conceptual framework and formulate our hypotheses on the firm likelihood of divesting and reinvesting, depending on their (transactional vs. relational) ownership. Then, we describe the data, variables, and econometric models, and present the empirical findings along with the discussion of results. The final section concludes and formulates possible avenues for future research.

2. Conceptual framework and hypotheses

2.1. Relational vs. transactional ownership

Building on seminal studies in corporate governance, law, and finance (Lowenstein, 1991; Ayres and Cramton, 1994; Gordon, 1994), scholars have shown increasing interest in the heterogeneity among shareholders and re-proposed and refined the notion of *relational ownership*, as opposed to *transactional ownership* (David et al., 2010; Zeitoun and Pamini, 2015; Zeitoun and Pamini, 2017; Aguilera and Crespi-Cladera, 2016; Mariotti and Marzano, 2020).

First, according to the literature (Aguilera and Jackson, 2003; David et al., 2010), relational owners are long-term investors with complex performance goals and a strong involvement in the firms they own. Specifically, relational owners are characterized by a forward-looking attitude, i.e., they plan for the future, commit to those plans, and provide a countervailing force to the short-term market pressures. Conversely, although *ex post* it may sometimes turn out that transactional owners retain their shares for a long time, their inherent attitude is flexibility, i.e., the ability to seize emerging opportunities in the market through rapid reallocation of resources.

Second, relational owners have complex performance goals that go beyond financial gains, whereas transactional shareholders “obtain returns solely from their shareholdings and lack other relationships with the firms” (David et al., 2010, p. 638). The relational owners’ multiple goals range from long-term economic outcomes, such as innovation and growth (Ma et al., 2014; Aguilera and Crespi-Cladera, 2016) to other non-economic utilities, such as the enhancement of the emotional, social, and political value of corporate assets, and more broadly “strategic interests” (Aguilera and Jackson, 2003).

Finally, relational owners commit to the firm in an *affective*, *calculative* or *normative* way, or a combination of them (Meyer and

¹ Previous research confirms that sunk costs deter firms from exiting the market (Mata and Portugal, 2000; Belderbos and Zou, 2009), even in the face of adverse economic conditions (O’Brien and Folta, 2009).

Allen, 1991).² They make relation-specific investments, i.e., investments that have no value outside the relationship with the firm. These relation-specific investments may sometimes take the form of “side bets”, i.e., resources devoted to the firm to fulfill some of the non-economic goals set by the relational owners. Examples include the development of an emotional bond with the business, direct involvement in the management of the firm through the nurturing of mutually specialized assets with other stakeholders (i.e. business ties, mutual trust and understanding through forms of cooperative behavior), the establishment of socio-political relationships with foreign host countries aimed at facilitating the firm’s international expansion, and diplomatic efforts to help a state controlled firm invest in a given geographic area.

Therefore, we consider firm heterogeneity with respect to the transactional- vs. relational-type of controlling owners. Specifically, we distinguish three categories of firms³: (i) *privately-owned (non-family) firms* (POs), in which the controlling owners and other blockholders are individual investors, other firms, external institutions, funds, managers (e.g., through a management buyout); (ii) *family-owned firms* (FOs), in which a family or more families jointly control the business and family members may (or may not) be involved in managerial tasks (Chua et al., 2012; Stewart and Hitt, 2012); (iii) *state-owned firms* (SOs), controlled by the state through the government as its agent.

POs can be referred to as *transactional-type firms* because their investors are typical examples of transactional owners. In contrast, both FOs and SOs are *relational-type firms*, though differing in the nature and level of relational commitment made by their respective owners.

As widely supported by the family business literature, families own long-term equity stakes and have multiple goals, as economic and financial considerations are balanced with family-centered social concerns to preserve the stock of affect-related values that family owners have invested in the firm (Gomez-Mejia et al., 2011; Berrone et al., 2012). Gomez-Mejia et al. (2007, p. 106) define socio-emotional wealth (SEW) as “nonfinancial aspects of the firm that meet the family’s affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty”. Therefore, families are *affectively* committed to their firms. It may be argued that, in many situations, the intention and sense of obligation to pass on the business to the next generations make family owners also *normatively* committed to FOs. Cumulatively, these considerations support the claim that relational ownership is substantial in FOs, considering also that members of the controlling family are often involved in the management of the firm. The greater the involvement of family members in management, the more the overlap between family and business gives rise to a “unique organization” characterized by the coexistence of the social capital of the family and the whole organization (Arregle et al., 2007). The managerial involvement of the family implies additional relation-specific investments and mutual reinforcement with those of the stakeholders and, therefore, the creation of ties sustained by strong commitment (Jaskiewicz et al., 2013).

As far as SOs are concerned, the state’s commitment to its firms is different and somewhat stronger than that of families. First, it is widely recognized that states are long-term and patient investors. Long-term orientation is fostered by soft budget constraints, e.g., government financial bailouts, cheap loans, subsidies, and so on, which give SOs a high level of trust from financial institutions (Megginson et al., 2014; Peng et al., 2016). This condition is hardly found in other typologies of firms, least of all in FOs.

Second, SOs are leaders in serving home country strategic interests and creating and implementing programs driven by social and political considerations (Shleifer and Vishny, 1994; Thomsen and Pedersen, 2000; Cuervo-Cazurra et al., 2014; Musacchio et al., 2015; Mariotti and Marzano, 2019; Sun et al., 2021).⁴ If families set a multiplicity of goals when dealing with their own businesses, things get even cumbersome when it comes to the state. In formulating and implementing strategies, the government, as an agent of the state, usually takes into account the utility of a variety of actors, e.g., taxpayers, trade-unions, industry associations, and local communities, thus often converging on plans that weigh up an array of diverse economic, social and political aspects.

Third, SOs often operate in “politically sensitive” industries (Colli et al., 2014), i.e. industries in which the state pursues public goals and mission-oriented policies (e.g., mining, energy, iron and steel, defense and aerospace, and so on). To some extent, investments undertaken by SOs within these industries are country-specific (and thus state-specific) in that they may serve the purpose of sustaining national economic activities to which other owners (e.g. foreign or private domestic investors) would not be adequately sensitive (Bass and Chakrabarty, 2014).

This state of affairs creates the conditions for the state to develop a multifaceted form of commitment to SOs. The state’s strong commitment to SOs is primarily *calculative*. As SOs are to a considerable extent instrumental in the pursuit of broader economic, social and political objectives, the state needs to keep controlling them by nurturing the relational side of corporate ownership.⁵ This implies a continual consideration of the costs and benefits associated with state ownership. However, the above mentioned SOs’ facilitated access to financial and non-financial resources tips the balance in favor of the benefits, thus reinforcing the relationship between the state and SOs. In many geographical contexts, these considerations of the economic and social reverberations of SO strategies on national economies have led to the institutionalization of state commitment to SOs (Boubakri et al., 2009). Golden shares and other control-enhancing mechanisms (cross-shareholdings, pyramids and other share manipulation techniques), through which the state continues to exert control over partially privatized companies around the world, are instances of a resilient normative commitment to

² The conceptualization of organizational commitment was originally developed by Meyer and Allen (1991) in the context of research dealing with on-the-job behavior and particularly the decision to maintain employment in an organization.

³ We refer to the main shareholder, which has the majority ownership in the firm or the major significant portion of its voting shares.

⁴ This is more so in state capitalism, coordinated market economies and other *dirigiste* countries (Mariotti and Marzano, 2019).

⁵ Overarching programs of national interest, e.g., increasing the economic long-run growth for the benefit of population, or pursuing the international competitiveness of domestic firms (Lenway and Murtha 1994) involve and strengthen non-market coalitions with political parties, economic and social institutions, and other corporatist intermediaries (Mariotti and Marzano, 2019).

keep leading the strategic moves of companies that still gravitate to the state (Bortolotti and Siniscalco, 2004).⁶

All in all, the long-term orientation of the state as a corporate owner, and the high level of commitment of the state to the controlled companies (so high that it even gets to be institutionalized) contribute to making the state the most relational of the corporate owners in our categorization.

2.2. Relational ownership and foreign divestment: the role of performance threshold, escalation of commitment and sunk costs

Foreign divestments have gained increasing attention over the past decades, giving rise to several theoretical frameworks and empirical designs (for recent reviews, see Arte and Larimo, 2019; Schmid and Morschett, 2020). Subsidiary poor performance and adverse economic and political conditions in host countries have been put forth as the major predictors of firm divestment (Benito, 1997; Duhaime and Grant, 1984). Failure is indeed the main reason for divestments, although divestments may also result from corporate restructuring driven by efficiency-oriented adjustments, or the desire to get a capital gain by selling a successful venture (Mariotti and Piscitello, 1999; Benito, 2005; Berry, 2013; Burt et al., 2019; Belderbos et al., 2021). Unlike restructuring divestments, failure divestments represent the dark side of change, as firms normally view with aversion and discomfort the decision to shut down foreign subsidiaries that are no longer achieving expected performance.

Controlling owners play a key role in divestment decisions (Feldman et al., 2016). Below we elucidate the relationship between our categorization of firms and their likelihood of divesting a foreign subsidiary (see Fig. 1).

According to Gimeno et al. (1997), economic and non-economic factors included in the owner's utility function determine a *firm-specific performance threshold*, corresponding to the "performance below which the dominant organization constituents will act to dissolve the organization" (Gimeno et al., 1997, p. 750).⁷ We revisit the concept and theorize the existence of a firm-specific performance threshold below which firm decision-makers are called upon to intervene by "battening down the hatches" or, alternatively, dissolving the subsidiary. The threshold depends on the type of ownership, i.e., transactional vs. relational, and, in the latter case, the level of ownership relationality. Founders may be so attached to their firms that they decide to persist despite poor performance (DeTienne et al., 2008). Families, as corporate owners, may act similarly to preserve SEW and intergenerational continuity (Symeonidou et al., 2022). As discussed in the previous section, when solving the trade-off between economic and social/political goals, tolerance of poor performance is typical of SOs. In general, the greater the relative weight attributed to non-economic goals and the owner commitment to the firm, the lower the performance threshold, and the higher the persistence in current activity.

Consequently, in relation to the decision to divest abroad, we expect the performance threshold to be lower for relational owners (compared to transactional owners), thus reducing their likelihood of divesting foreign subsidiaries. The more the owners make relation-specific investments in foreign subsidiaries in pursuit of their non-economic goals (thus enhancing the affective, social and political value of assets - Zellweger and Astrachan, 2008; Deng et al., 2018) the more willing they are to accept a low level of economic performance (as the latter is offset by avoiding the losses that would be caused by the dissipation of the relation-specific assets pertaining to the divested foreign subsidiaries). For example, family managers in charge of managing foreign subsidiaries may hardly agree on divesting if they have established business networks in host countries that they cannot exploit outside the FO. Likewise, the state, as owner, would easily go beyond economic performance when political relationships and/or grand strategy issues are at stake.

In addition, when economic performance is below the threshold, relational owners still hope to turn things around by investing additional economic and financial resources so as not to give up the value of the relation-specific assets they have cultivated in foreign subsidiaries (Staw and Ross, 1989; Ross and Staw, 1991; Brockner, 1992). Such an *escalation of commitment* (Staw, 1976; Staw and Hoang, 1995; Slesman et al., 2012) increases sunk costs that, in turn, favor avoidance of divestment. In fact, despite the well-known "sunk cost fallacy", reacting by preventing sunk costs from materializing is a rational behavior under a wide range of circumstances (McAfee et al., 2010). Research supports the commitment escalation argument and recognizes its non-economic root, which goes beyond miscalculation arguments and implies self-justification and behavioral commitment explanation (Staw and Hoang, 1995).

FOs appear naturally inclined toward escalating commitment to low performing activities because of their high level of ownership commitment resulting from a strong sense of identity and family overlap with the organization (Woods et al., 2012; Pongelli et al., 2018; Chirico et al., 2020). Furthermore, FOs' divestment aversion and escalation of commitment increase when activities have an international scope and relation-specific assets must be developed in a foreign country. Indeed, replicating the business model abroad based on trusted and stable relationships with stakeholders and local community, as well as engaging in local networking and gaining social legitimacy, is more demanding for FOs than for POs (Thomas and Graves, 2005; Kontinen and Ojala, 2010; Pongelli et al., 2018). This is all the more true the more families are involved in the management of the firms (Kim et al., 2019).

Due to the interlink between business and politics that shapes the state commitment to SOs, we expect SOs to fall into an even

⁶ Even if the use of golden shares and other similar tools has been legally challenged in many institutional contexts (see the European Union where the European Court of Justice deemed it contradictory to the principle of free circulation of capital within the European Union), what matters in our case is the never lessened sense of obligation that large part of the population in many countries feels toward maintaining the state control over SOs.

⁷ The authors focus on the owners' human capital attributes as determinants of the threshold, which can be viewed through the lens of relational ownership: factors such as the specificity of human capital (or its fungibility in alternative businesses), and the psychic income from entrepreneurship clearly increase the owner's commitment to the firm and ward off the decision to close the business even if performance is lower than expected.

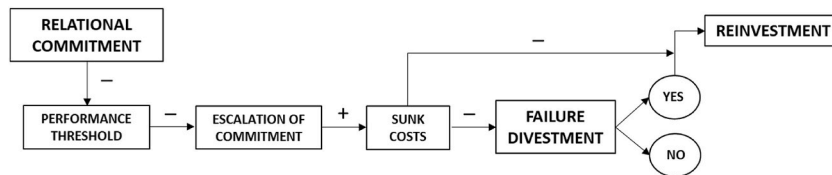


Fig. 1. Conceptual framework

Notes: the figure provides a causal diagram illustrating the conceptual framework. A link marked + (or -) indicates that the two causally related constructs vary in the same (or opposite) direction.

deeper escalation of commitment.⁸ As SOs are often seen as vehicles for the exercise of diplomacy and foreign policies, alongside more conventional social and economic goals (Cuervo-Cazurra et al., 2014; Mariotti and Marzano, 2019), divestment of foreign subsidiaries would entail large political losses, and may also engender negative externalities on the international reputation of domestic politicians, with undesirable implications for their future initiatives. In this case, the escalation of commitment to foreign subsidiaries within the SOs' boundaries is intertwined with the escalation in political decision-making, according to which politicians would hardly give up fruitless political initiatives if it meant they had to publicly admit that something is going wrong.⁹

Summarizing our arguments, we hypothesize that:

Hypothesis 1. The likelihood of a failure divestment of a foreign subsidiary is lower for relational-type firms (FOs and SOs) than for transactional-type firms (POs).

Hypothesis 2. Among relational-type firms, the likelihood of a failure divestment is lower for SOs than for FOs.

2.3. Relational ownership and foreign reinvestment: the role of sunk cost barriers

Escalating commitment can be dangerous as firms undertake increasingly risky sunk investments, thus becoming trapped in poorly performing (or even failing) initiatives (Schulz-Hardt et al., 2009; Sleesman et al., 2012). Therefore, as escape routes become increasingly difficult and eventually impossible to achieve, the commitment trap will ultimately lead to a great waste of resources.

Given the inclination of families toward escalating commitment, the topic has attracted family business scholars and research has raised awareness of the commitment trap and difficulties of decreasing commitment (Woods et al., 2012; Chirico et al., 2018; Pongelli et al., 2018). As discussed in the previous section, the commitment trap is also likely to occur in the case of SOs. Indeed, strategic interests related to diplomacy and international relations may lead SOs to persistently commit to subsidiaries in some countries, despite economic losses and little hope of "righting the ship".

Thus, relational ownership generally triggers a negative spiral that results in high sunk costs incurred by entrapped firms. What is relevant in our framework is that escalation of commitment and commitment trap are important antecedents to the firm's decision as to whether or not to reinvest in the host country where the previous divestment occurred. On the one side, repetition of past behavior may reduce uncertainties surrounding a new operation (Gao and Pan, 2010); but, on the other side, firms need to absorb the traumatic and costly exit experience (Surdu et al., 2019).

In this light, expectations about reinvestment performance in a country are crucial for decision-making. Expectations are based not only on information about the economic and institutional conditions in the host country, which may change over time and require firms to adapt their strategies to a new environment (Peng, 2003; Xia et al., 2009), but also on previous experience that led them to divest. Especially in the short and medium term, previous experience plays a major role, while in the long-term it may dissipate due to loss of organizational memory and changes in host country conditions (Levitt and March 1988).

The key trait of the prior divestment experience is the magnitude of sunk costs incurred, as they represent the relation-specific investments made to secure the *emotional* and/or *calculative* and/or *normative* commitment to the foreign subsidiary as part of the firm, which the divestment has dissipated. The economic literature has shown that sunk costs constitute a barrier to entry into a market (if entry fails, the entrant, unable to recover sunk costs, will suffer greater losses; see Baumol et al., 1982). In our context, if the sunk costs in the previous experience were high, the projection of these costs into the future (i.e., the expected sunk costs in the event of a new failure) results in realistically negative expectations that discourage firms from reinvesting in the focal host country (see Fig. 1).

In other words, the higher the sunk costs incurred in the event of a failure divestment, the higher the barrier to reinvest and thus the lower the likelihood of reinvestment. Thus, we hypothesize that:

⁸ For example, even with poor economic performance, a Chinese SO will hardly divest a subsidiary that can bring political benefits to the Belt and Road Initiative.

⁹ In political groups (e.g., government bodies and parties), each politician has a social identity as a substantial part of her self-esteem and power derives from political membership (Dietz-Uhler, 1996). In addition, political groups are largely subject to "external binding", which occurs when individuals or groups become strongly linked with their actions. Now, since outcomes of political actions have great effects on the reputation of political groups and each of their members (through social identity), external binding gets escalation of commitment stronger in the political arena as politicians would never collectively admit something is going wrong.

Hypothesis 3. After a failure divestment, the likelihood of reinvesting in the same host country is lower for relational-type firms (FOs and SOs) than for transactional-type firms (POs).

Hypothesis 4. Among relational-type firms, the likelihood of reinvesting is lower for SOs than for FOs.

3. Methodology

We analyze the decision to divest a foreign subsidiary and the subsequent decision to reinvest in the same country. The interdependence between divestment and reinvestment decisions has some relevant implications for our sampling strategy.

First, we model time to divestment (for the three categories of firms) by taking into account the fact that some subsidiaries had not yet been divested at the time of data collection, i.e. the lifespan of some subsidiaries is censored. Second, since only divested subsidiaries can be followed by a reinvestment in the same country, we have to deal with self-selection bias. We achieve both goals by sampling foreign investments that created new subsidiaries undertaken in a pre-identified time window, tracking them up to divestment (if any) and following up divesting firms to see whether a reinvestment in the same country occurred. In this way, we model the time to divestment decision by performing a survival analysis and use a two-step procedure to mitigate self-selection bias when modeling the probability of reinvestment.

Second, we focus on failure divestments. Distinguishing between closure and selloff of subsidiaries, previous literature has found that only closures can be traced back to cases of extremely poor performance (e.g., Chang and Singh, 1999; Ushijima and Iriyama, 2015). Accordingly, we proxy failure divestments as those that occurred through the shutdown of the foreign subsidiary. Residual divestments, which occurred through selloffs, may be (mostly) restructuring divestments or instances of underperformance that ultimately suggest the owners sell the assets to third parties if they are saleable and separable. Since it is difficult to distinguish between the different cases, unless we adopt selection criteria that are too influenced by subjectivity, we prefer to include all these cases in one mixed category and use it to make comparisons. Needless to say, we expect that our hypotheses will not hold for the mixed category.

3.1. Sample description

We test our hypotheses using data about foreign investments/divestments/reinvestments in manufacturing activities undertaken by 602 Italian firms during the 2000–2015 period. Data come from the annual census carried out by the Italian Trade & Investment Agency (ICE) and concern the entire population of Italian firms with turnover exceeding 2.5 million Eur that undertook at least one foreign manufacturing investment in the period indicated above.¹⁰ Firms are categorized according to the typology of the controlling owners. We identify FOs as those firms that are controlled by one or two families with a 50% (if unlisted) or 25% (if listed) stake (Banalieva and Eddleston, 2011; Miller et al., 2013). The lower threshold for the latter derives from a larger number of dispersed shareholders in the ownership structures of listed companies, which make it possible for family block holders to control the firm with a lower equity share (La Porta et al., 1999). Following previous studies (Pedersen and Thomsen, 1997; Mariotti and Marzano, 2020) and identification criteria adopted by international institutions (e.g., European Commission, 2016), we define SO as a firm in which the state holds at least 20% of the capital shares and the government appoints at least one member to the company board of directors. The residual category includes POs, i.e., firms controlled by private (non-family) investors.

Our sample consists of 2421 foreign investments that established new subsidiaries undertaken in the manufacturing industries across 92 different countries during the 2000–2011 period. The sampled investments are quite heterogeneous in terms of industry (see Table A1 in Appendix for further details). The most represented industries are machinery and mechanical equipment and basic metals and fabricated metal products, which reflects the Italian international specialization pattern (Amighini et al., 2011).

The sample includes 1086 (44.9%) greenfield investments and 1335 (55.1%) cross-border acquisitions, which are mostly majority-owned (2027 accounting for 83.7% of the investments). Equally-owned (169) and minority-owned (225) investments cumulatively account for the remaining 16.3% of the foreign entries. SOs and POs are more prone to enter foreign markets through acquisitions, whereas investments undertaken by FOs are more evenly distributed. Conversely, the three groups of firms do not differ significantly in the ownership choice as all of them prefer majority-owned subsidiaries to equally- and minority-owned ones. The favored host country is China, followed by the United States, Germany, France and India. Table A2 in Appendix provides further details.

Our sample includes 294 divestments. Most of divestments concern cross-border acquisitions (209 out of 294, corresponding to the 71.1%), with the remaining 85 (28.9%) referring to greenfield investments. Since cross-border acquisitions account for 55.1% of the investments, these figures indicate that acquisitions are more likely to be divested than greenfield investments. Most of divestments concern majority-owned investments (234 out of 294). However, as the incidence of the latter in the sampled investments (83.7%) is higher than the share of majority-owned divestments (79.6%), divestment rate is higher for non-controlled investments (equally- and minority-owned). In 79 cases, firms reinvested into the same country within five years after the divestment, while in 73 cases they did not undertake any new foreign entry.

Importantly, 157 (53.4%) foreign subsidiaries ended up being shut down, whereas the remaining 137 (46.6%) were sold. The

¹⁰ For more information, <https://www.ice.it/it/studi-e-rapporti/rapporto-italia-multinazionale>.

reported percentage of shutdown subsidiaries is very close to that inferable from the ICE census for all the cases for which the divestment mode is known and spanning a longer time period (approximately equal to 55%).¹¹

3.2. Dependent variables

The dependent variables of our empirical analyses are two dummy variables. *Divestment* is a time-varying variable that switches from 0 to 1 in the year when the subsidiary *i* is shut down (whereas it is always 0 for surviving subsidiaries).¹² It will be used as a dependent variable in the divestment model, through which Hypotheses 1 and 2 will be tested. The variable *Reinvestment* is a dummy variable taking value 1 if the shutdown of subsidiary *i* is followed by a reinvestment in the same country that occurs in the medium term, and 0 otherwise. We operationalize the medium term period by considering five years after the date *T* of the divestment in the host country. Specifically, we consider five years as a period in which the memory of sunk costs will certainly remain vivid and the host country business conditions will not change significantly. Moreover, especially in the case of greenfield investments, this period can be sufficient for a new subsidiary to be established and become operational. Over a longer time horizon it is quite reasonable to assume that the link between past and present experience fades and the local environment may change. As we track reinvestments occurring up to 2015, in order to give the last potential divesting firm sufficient time to reinvest, we restrict the sample of our investments to those undertaken no later than 2011. This is the dependent variable of the reinvestment model, through which Hypotheses 3 and 4 will be tested.

3.3. Explanatory variables

We identify the three groups of firms by using two dummy variables (as POs are treated as our baseline group). *FO* is a dummy variable taking the value 1 if the firm is a FO, and 0 otherwise; *SO* is a dummy variable taking the value 1 if the firm is a SO, and 0 otherwise.

3.4. Control variables

Previous studies have identified several country- and firm-level predictors that affect the dynamics of international investments (see Procher and Engel, 2018; Surdu et al., 2019). Accordingly, in order to avoid biases due to confounding factors we insert them as controls in both our models (i.e., the divestment and reinvestment models). Controls are measured at each year *t-1* along the investment timespan.

3.4.1. Firm-level controls

International experience can help firms avoid errors in investing abroad and therefore post-entry risk of divestment and reinvestment (Coudounaris et al., 2020). We control for firm international experience by relying on three different indicators (Delios and Henisz, 2003). *Host_exp_time* is the logarithm of the number of years passed since the first subsidiary was established in the host country (plus 1). *Int_exp_width* is the logarithm of the number of countries in which the firm owns at least one subsidiary (plus 1). *Int_exp_time* is the logarithm of the number of years passed since the firm established the first foreign subsidiary (plus 1). The expectation is for a negative relation between experience and subsidiary divestment, while the effect of experience on reinvestment is questionable, as learning-through-experience (divestiture experience included) can lead to opposite outcomes, depending on the assessment of the previous failure, which may or may not suggest reiterating the investment in the host country.

We control for firm size (*Firm_size*) by using the logarithm of the number of employees, firm age (*Firm_age*) and *Firm_listed*, a dummy variable taking the value 1 if the firm is listed, and 0 otherwise. Previous literature has outlined that large multinational corporations exhibit a footloose behavior, along processes that recombine, bundle, unbundle and orchestrate resources within the network of subsidiaries, and therefore have a high rate of divestments and relocations (e.g., Gokh and Filippaios, 2021). Other studies argue that large multinational corporations support effective investment/divestment decisions by relying on the availability of financial resources and costly information, so that they are likely to divest/reinvest due to competitive restructuring. Conversely, small firms have to adopt more exploratory strategies, often based on hazardous gambling on emerging opportunities, and more frequently divest their foreign affiliates because of a failure (e.g., Mariotti and Piscitello, 1999).

Finally, we control for the number of subsidiaries in the host country. *Host_subs* is the logarithm of the number of subsidiaries operating in the host country (plus 1). Song (2014) find that stand-alone subsidiaries in host countries are less likely to be divested even under adverse economic conditions, as they play the role of a platform investment in that location. With more affiliates established in the host country, the probability that a single subsidiary plays this role decreases and under unfavorable conditions the probability of its divestment increases. The presence of multiple subsidiaries can negatively or positively affect the reinvestment decision, depending on whether their activities can substitute or complement the divested subsidiary. If they fully replace the divested assets, the reinvestment will not take place. However, they are more likely to only partially substitute and mostly complement these activities, so as to

¹¹ It is worth noting that, if we refer to all foreign activities (beside manufacturing, also trade, marketing, distribution, transport, services, etc.) the percentage of shutdown subsidiaries rises to 75%, due to smaller scale of entry investments and greater volatility of activities. In any case, such an evidence confirms the predominance of failure divestments.

¹² When an investment turns out to be divested, observations relative to the following years are dropped.

reduce the costs and risks of reinvestment, through intra-firm economies of scale and scope and transferable (both tangible and intangible) assets (machinery, property, human capital, goodwill, advertising, etc.).

3.4.2. Country-level controls

At the country-level, we control for the main conventional factors considered in the literature. The GDP of the host country measures the potential market size and therefore may influence the investment decisions of firms. The variable *GDP* is the log-transformed host country GDP. Likewise, the GDP growth of the host market indicates whether the aggregate demand is expanding (or shrinking). When this is the case, market-seeking strategies are more likely to be sustainable with clear effects on both the probabilities of divesting and reinvesting (Konara and Ganotakis, 2020). The variable *GDP.growth* is the host country GDP variation between year $t-3$ and year $t-1$. Both variables are measured in constant 2010 US dollars and come from the World Bank database.

We control for the host country risk by using the political risk indicator developed by the International Country Risk Guide. The political risk indicator includes variables covering both political and social attributes and categorized under the labels: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption. Since the indicator ranges between 0 and 1 moving from riskier to less risky countries, we subtract it from 1 in order to obtain *Country_risk*, a variable whose higher values indicate riskier countries. The cultural distance between the home and the host country plays a central role in foreign investments as it is related to the uncertainty perceived by the parent firm in the foreign context (e.g., Brouthers and Brouthers, 2000; Kirkman et al., 2006). We use the operationalization provided by Kogut and Singh (1988), and rely on the five Hofstede (2001) cultural dimensions (power distance index, individualism, uncertainty avoidance index, masculinity, and long-term orientation) to construct the overall index *Cultur_distance*. Similarly, to some extent, the firms' perceived uncertainty is related to the geographic distance from the home country (Malhotra and Gaur, 2014). We collect air distance data between Italy and the foreign country's capital cities from the CEPII database. Data have been then log-transformed because of the right skewness of the distribution to obtain the variable *Geogr_distance*.

3.4.3. Investment-level controls

Since the first studies on divestments, it has been highlighted that the probability of divestment depends on the entry mode and ownership arrangement (Benito, 1997; Mariotti and Piscitello, 1999). The recent study by Coudounaris et al. (2020) on three decades of subsidiary exits confirms that acquired affiliates are less likely to survive than greenfields. Studies also suggest that minority-owned subsidiaries are more likely to be divested because of higher risks of disagreement with partners and easier withdrawal due to lower resource commitment (Dhanaraj and Beamish, 2004; Berry, 2013; Belderbos et al., 2021).

We control for the establishment mode choice of the foreign subsidiary through a dummy variable (*Acquisition*) that is equal to 1 when the foreign investment is a cross-border acquisition and 0 when it is a greenfield investment. Likewise, we control for the ownership choice of the foreign investment by distinguishing minority-owned from equally- and majority-owned subsidiaries. Accordingly, we use a dummy variable (*Minority*) that is equal to 1 when the subsidiary entails a minority-owned investment, and 0 when it is an equally- or majority-owned one.

In addition, in the divestment models we include investment timespan dummies that allow for the hazard rate of divestment to change overtime.

3.5. Estimation strategy

In order to test Hypotheses 1 and 2, we need a model for the probability of divesting. We estimate a discrete time duration model, a regression analysis commonly used to deal with survival data wherein the event can only happen at discrete values of time (Hess and Persson, 2012). This is an appropriate approach in our case as although foreign subsidiaries can be divested at any time, discrete data are the result of interval-censoring, - i.e., divestments can only be observed at discrete moments because recorded on discrete units (once per year). Investments are observed over time up to the year of divestment (for divested subsidiaries), or up to 2011 for right-censored investments (surviving subsidiaries). Discrete time duration models can be easily estimated as binary models after choosing an admissible distribution function and a time dependence structure. We choose the normal distribution and use investment timespan dummies to allow for a flexible time dependence structure.

Concerning the probability of reinvestment in the same country after divestment (Hypotheses 3 and 4), we need to take into account the self-selection of divesting firms. To do so, we use a two-step estimation strategy, a common means of correcting for non-randomly selected samples. The first stage is the probability of divesting (i.e. the model used for testing Hypotheses 1 and 2). Investment timespan dummies from t_{inv_4} (or t_{inv_6}) to $t_{inv_{12}}$ work as exclusion restrictions. Instrument exogeneity comes from the assumption that although early failures of foreign subsidiaries may be due to implementation problems in the startup phase and thus be strongly linked to reinvestment decisions, once the subsidiary has survived through the startup phase, i.e., from up to three to up to five years, the residual elapsed time until closure should be unrelated to the likelihood of reinvestment.¹³ In the second stage, we correct for self-selection by incorporating a transformation of the predicted probabilities of divesting (obtained by using the estimates of the first stage model) as an additional explanatory variable - commonly referred to as inverse Mills ratio (*IMR*) - in the regression model. The adoption of the Heckman correction is based on the insight that sample selection can be viewed as a form of omitted-variables bias.

¹³ See Bettis et al. (2014) on the need for "logical and convincing arguments based on knowledge of [...] the problem at hand" when selecting instruments.

4. Results

4.1. Summary statistics

Table 1 reports summary statistics relative to our explanatory and control variables, while Table 2 shows the correlation matrix. No particular concerns emerge about the correlation values. We compute the single variance inflation factors (VIF) for each estimated model and observe that the models do not suffer of multicollinearity as the single VIFs are never higher than 10 – the widely accepted threshold to detect collinearity – while the mean VIF is always below the standard threshold of 6 (Hair et al., 2010).

4.2. The divestment choice

In order to test our Hypotheses 1 and 2, we rely on a discrete time duration model. The results are reported in Table 3, where we provide the marginal effects of each independent variable. We also include industry and year dummies along with investment timespan dummies, the latter allowing for the hazard rate to change overtime. Standard errors are clustered at the investment level in column (1) and at the firm level in columns (2–4).

Column (1) reports estimates of a linear probability model (LPM), whereas columns (2) and (3) report marginal effects computed by using probit and panel probit estimates, respectively. By looking at the controls we can conclude that international experience matters when choosing to shut down a foreign subsidiary. The probability of closing a foreign subsidiary is higher the shorter the time passed since the first investment was undertaken in the country (the marginal effect of *Host_exp_time* is negative and statistically significant at the 1% level in the LPM and at the 10% level in the simple probit) and the lower the firm international experience (the marginal effect of *Int_exp_time* is negative and statistically significant at the 5% level irrespective of the estimator used). These results seem to suggest that the time dimension of international experience is more likely to drive the decision to shut down a foreign subsidiary than the width dimension.

Moving to firm-specific characteristics, both *Firm_size* and *Firm_listed* do not exert any significant effect on the probability of closing a foreign subsidiary, whereas *Firm_age* has a positive and statistically significant marginal effects (ranging from 1% to 5% statistical significance level depending on the estimator considered). The effect of the number of subsidiaries operating in the host country is also positive and statistically significant (always at the 1% level). Moreover, majority- and equally-owned subsidiaries are more likely to be closed than minority-owned ones.

When host country-specific variables are considered, only *Country_risk* is statistically significant in explaining the probability of closing a foreign subsidiary. Conversely, the remaining factors seem not to play any role in driving divestment choices.

Results obtained via LPM, simple probit and panel probit invariably indicate that relational-type firms (FOs and SOs) exhibit a lower probability of closing a foreign subsidiary. The marginal effects of both *FO* and *SO* are always negative and statistically significant, thus suggesting that both FOs and SOs clearly differ from POs (whose owners are the least relational) in their propensity to shut down affiliates abroad. Therefore, our Hypothesis 1 is supported.

After having established that relational owners are less prone to close foreign subsidiaries, we test whether our hypothesized firm type ranking when considering the relationality of their owners (SOs, FOs, POs) is related to the probability of subsidiary shutdowns. In particular, we test that the likelihood of SOs closing subsidiaries abroad is lower than that of FOs. To do so, we must test the null hypothesis that the difference between the marginal effects of *SO* and *FO* is equal to 0 and reject it. We do so by using a standard Wald test and obtain a p-value of 0.095, 0.135 and 0.094 for LPM, simple probit and panel probit estimates, respectively. Therefore, we can reject our null hypothesis at the 10% statistical level when using two out of three estimators. The same test shown in the next subsection, which is devoted to robustness checks, gives even stronger results (the difference in probabilities is always statistically significant at the conventional levels). This is in accordance with our conceptual framework which implies that the probability of divesting decreases going from POs to SOs passing through FOs, thus giving support to our Hypothesis 2.

We make a point of distinguishing shutdown subsidiaries from sold subsidiaries. Sunk costs increase through the escalation of commitment and commitment trap only in case of unsuccessful investments, which are well proxied by shutdowns. Indeed, none of the mechanisms put forward by our theoretical framework would be able to explain divestments that occur for restructuring reasons or to realize capital gains in the market for firm control. To further corroborate our theoretical framework, we thus re-estimate the same model used before, except for the dependent variable *Divestment*, which is now replaced by a time-varying variable that switches from 0 to 1 in the year subsidiary *i* is sold (whereas it is always 0 for other subsidiaries). As shown in column (4), our main explanatory variables, *FO* and *SO*, are not statistically significant. These results make us quite confident to say that the findings go in the direction marked by our theoretical framework, according to which more relational owners avoid closing subsidiaries, i.e., failing without any possibility to recover the costs incurred at the investment stage and along the subsidiary lifecycle, whereas they are as likely as less relational owners to sold their foreign subsidiaries in the global market for firm control.

4.3. Robustness checks

In Table 4, we strengthen our findings by providing some robustness checks.

First, we estimate the same specifications as in Table 3 through a Cox proportional hazard model (CPHM; see Cox, 1972; Ferragina and Mazzotta, 2014 for an application). This method does not assume any particular survival structure but it is not truly nonparametric because it does assume that the effects of the independent variables upon survival are constant over time and are additive in one scale. Column (1) of Table 4 shows the estimated hazard ratios, i.e. the ratios of the hazard rates corresponding to the conditions described by

Table 1
Summary statistics.

	Obs.	Mean	Median	Sd	Min	Max
<i>FO</i>	14,333	0.81	1.00	0.39	0.00	1.00
<i>SO</i>	14,333	0.05	0.00	0.22	0.00	1.00
<i>Host_exp_time</i>	14,333	1.83	1.95	0.95	0.00	4.65
<i>Int_exp_width</i>	14,333	1.85	1.95	0.76	0.00	3.53
<i>Int_exp_time</i>	14,333	2.78	2.94	0.87	0.00	4.67
<i>Firm_size</i>	14,333	7.79	7.70	1.79	3.87	12.2
<i>Firm_age</i>	14,333	3.53	3.56	0.85	2.40	4.98
<i>Firm_listed</i>	14,333	0.33	0.00	0.47	0.00	1.00
<i>Host_subs</i>	14,333	1.09	0.69	0.73	0.00	3.71
<i>GDP</i>	14,333	27.7	28.1	1.64	21.7	30.4
<i>GDP_growth</i>	14,333	11.5	8.60	11.8	−60.5	48.6
<i>Country_risk</i>	14,333	0.26	0.23	0.14	0.01	0.75
<i>Cultur_distance</i>	14,333	1.48	0.75	1.54	0.11	6.33
<i>Geogr_distance</i>	14,333	7.86	7.44	0.97	6.20	9.83
<i>Acquisition</i>	14,333	0.56	1.00	0.50	0.00	1.00
<i>Minority</i>	14,333	0.92	0.00	0.29	0.00	1.00

two levels of each independent variable. The hazard ratio of *SO* is 0.137 which means that the rate of subsidiary shutdown (the shutdown rate at time t conditional on survival until time t or later, that is, $T \geq t$) of SOs is 86.3% (100%–13.7%) lower than that of POs. Similarly, by going from POs to FOs, the shutdown rate decreases by 47.4% (100%–52.6%). These results are very much in line with those obtained via the discrete time duration models. In fact, if we consider the marginal effects after probit [Columns (2) and (3) of Table 3], a decrease in the probability of closing foreign subsidiaries by approximately 1.7% (in absolute terms) when going from POs to SOs translates into an approximately 85% decrease in the shutdown rate (if we take into account that the shutdown rate of POs is approximately 2%). The same can be said for FOs.

Second, columns (2–5) of Table 4 show the results of alternative specifications of our models. In particular, models in columns (2–3) include three additional controls at the firm-level, i.e., *Firm_liquidity*, the ratio between current assets and current liabilities and *Firm_debt*, the ratio between total liabilities and equity, in the model whose results are reported in column (2) and *Firm_ROI*, the ratio between the earnings before interests, taxes, depreciation and amortization (EBITDA) and total assets, in the model whose results are reported in column (3). Firm liquidity and debt are included to account for financial constraints that may influence the decision to divest abroad, whereas firm performance controls for differences in managerial competence across firm types when it comes to make (foreign) investment decisions that may in turn affect subsidiary shutdown abroad (e.g., Damiani et al., 2018, regarding the more inefficient management of FOs in the Italian context; Goldeng et al., 2008, reporting the comparatively poor performance of Norwegian SOs). The results are unaffected by the inclusion of these additional controls. In column (4), to mitigate multicollinearity we exclude control variables accounting for the international experience of parent companies, i.e., *Host_exp_time*, *Int_exp_width* and *Int_exp_time*, which are highly correlated among them and with *Firm_size*. Results remain unaffected and the VIFs at variable-level never exceed 5. Finally, in column (5), we add host country dummies to absorb host country level unobservable time-invariant characteristics that can affect divestment decisions and also correlate with ownership type of firms preferably investing and divesting in given locations.¹⁴ The marginal effect of *FO* loses a little in significance whereas the marginal effect of *SO* is still negative and statistically significant at the 5% statistical level. As above discussed, when we test that the difference in probabilities of SOs and FOs closing foreign subsidiaries is equal to 0, we could not reject the null hypothesis at the conventional levels when using the probit estimator. Using the models reported in Table 4 (which are presented as robustness checks because they are estimated using fewer observations, fewer controls or using an estimator not compatible with the Heckman model used later), we would have been always successful instead. The p-value is 0.057 when using the CPHM estimates in column (1), 0.069 and 0.046 when using the discrete time duration models estimates in columns (2) and (3) respectively, and 0.073 when using the LPM model in column (5). These results strengthen our test relative to Hypothesis 2.

4.4. The reinvestment choice

Table 5 presents the results of the reinvestment models. Since we estimate binary models, the results are reported as marginal effects of the relative independent variable on the probability of reinvesting in the same country. Columns (1–2) report results of models where we study the probability of reinvesting in the same country after having shut down a foreign subsidiary. The dependent variable is a binary variable set equal to 1 when the firm reinvested in the same country within five years upon closing a foreign subsidiary, and 0 otherwise. We estimate two Heckman selection models as some unobservable factors may be responsible for both the decision to shut down and the subsequent decision to reinvest. The first stage model is estimated by using the specifications in Table 3. The variables used as exclusion restrictions, i.e., investment timespan dummies from t_{inv4} (in column 1 or from t_{inv6} in column 2) to t_{inv12} are jointly highly significant (chi-squared statistics are equal to 48.20 with a p-value of 0.00 when considering the largest set of

¹⁴ In order to achieve convergence, we use the LPM estimator.

Table 2
Correlation matrix.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1)	<i>FO</i>	1.00															
(2)	<i>SO</i>	−0.48	1.00														
(3)	<i>Host_exp_time</i>	−0.05	0.13	1.00													
(4)	<i>Int_exp_width</i>	−0.08	0.12	0.43	1.00												
(5)	<i>Int_exp_time</i>	0.03	0.03	0.47	0.72	1.00											
(6)	<i>Firm_size</i>	0.06	0.31	0.36	0.68	0.50	1.00										
(7)	<i>Firm_age</i>	0.03	−0.02	0.15	0.35	0.26	0.40	1.00									
(8)	<i>Firm_listed</i>	−0.16	0.30	0.23	0.39	0.27	0.55	0.22	1.00								
(9)	<i>Host_subs</i>	−0.10	0.27	0.68	0.48	0.36	0.47	0.19	0.37	1.00							
(10)	<i>GDP</i>	−0.10	0.15	0.19	0.06	0.05	0.12	0.07	0.13	0.24	1.00						
(11)	<i>GDP_growth</i>	0.07	−0.11	−0.21	−0.10	−0.08	−0.04	0.00	−0.02	−0.17	0.03	1.00					
(12)	<i>Country_risk</i>	0.12	−0.13	−0.15	−0.08	−0.03	−0.04	−0.00	−0.03	0.22	−0.21	0.58	1.00				
(13)	<i>Cultur_distance</i>	0.08	−0.09	−0.14	−0.05	−0.03	−0.00	0.05	0.01	−0.15	0.03	0.74	0.74	1.00			
(14)	<i>Geogr_distance</i>	−0.10	0.01	−0.05	0.05	0.05	0.07	0.07	0.12	−0.06	0.43	0.39	0.34	0.52	1.00		
(15)	<i>Acquisition</i>	−0.11	0.09	0.18	0.25	0.16	0.18	0.10	0.15	0.27	0.14	−0.31	−0.38	−0.33	−0.15	1.00	
(16)	<i>Minority</i>	−0.02	0.08	−0.02	−0.01	−0.02	0.01	0.01	0.00	−0.03	−0.02	0.02	0.05	0.04	0.03	0.01	1.00

Table 3
Divestment models.

	Subsidiaries shut down			Subsidiaries sold
	<i>LPM</i>	<i>Probit</i>	<i>Panel probit</i>	<i>Probit</i>
	(1)	(2)	(3)	(4)
<i>FO</i>	−0.005* (0.003)	−0.006** (0.002)	−0.006** (0.003)	0.002 (0.003)
<i>SO</i>	−0.015** (0.006)	−0.017** (0.007)	−0.017** (0.007)	0.000 (0.006)
Firm level controls:				
<i>Host_exp_time</i>	−0.005*** (0.002)	−0.003* (0.002)	−0.003 (0.002)	−0.002 (0.001)
<i>Int_exp_width</i>	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)
<i>Int_exp_time</i>	−0.003** (0.001)	−0.005** (0.002)	−0.005** (0.002)	0.000 (0.002)
<i>Firm_size</i>	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	−0.001 (0.001)
<i>Firm_age</i>	0.003*** (0.001)	0.003** (0.001)	0.003** (0.001)	0.001 (0.001)
<i>Firm_listed</i>	−0.000 (0.003)	0.002 (0.002)	0.002 (0.003)	0.014*** (0.003)
<i>Host_subs</i>	0.013*** (0.003)	0.006*** (0.002)	0.006*** (0.002)	0.002 (0.002)
Country level controls:				
<i>GDP</i>	0.000 (0.001)	−0.000 (0.001)	−0.000 (0.001)	−0.001* (0.001)
<i>GDP_growth</i>	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	−0.000 (0.000)
<i>Country_risk</i>	−0.020** (0.009)	−0.022* (0.012)	−0.022* (0.011)	−0.002 (0.009)
<i>Cultur_distance</i>	0.000 (0.001)	−0.001 (0.001)	−0.001 (0.001)	0.000 (0.001)
<i>Geogr_distance</i>	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	0.001 (0.001)
Investment level controls:				
<i>Acquisition</i>	0.001 (0.002)	0.002 (0.002)	0.002 (0.002)	0.004** (0.002)
<i>Minority</i>	−0.006*** (0.002)	−0.009** (0.004)	−0.009 (0.004)	0.013*** (0.002)
Industry dummies	Yes	Yes	Yes	Yes
Timespan dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Investments	2240	2166	2166	2108
Observations	14,333	13,778	13,778	13,086

Standard errors in brackets. *, ** and *** denote significance at the 10%, 5% and 1% level, respectively.

exclusion restrictions and 38.16 with a p-value of 0.00 when considering the narrowest one) thus making the instrument relevance condition met. Then, the estimates of the duration model are used to obtain the *IMRs* for each observation at the second stage. Moreover, because our main explanatory variables are defined at the firm level, we allow for correlation of residuals by clustering standard errors at the firm level.

Most of the control variables (international experience, firm age, the extension of the subsidiary network in the focal host country, country risk, cultural distance) are statistically significant in explaining the reinvestment decision after a subsidiary shutdown. Marginal effects of *IMR* are not statistically significant when using the largest set of exclusion restrictions whereas they become statistically significant when considering the narrowest one, thus indicating that selection bias may be an issue in our data.

Results in columns (1) and (2) agree on indicating that, among the three categories of firms, SOs are the least likely to reinvest in the same country after having closed a foreign subsidiary. The magnitude of the effect is large since it goes beyond unity. Moreover, the probabilities of reinvesting exhibited by FOs are significantly lower than that exhibited by POs. The differences are statistically significant at the 5% statistical level in column (1) and at the 1% statistical level in column (2). Cumulatively, these results support our [Hypothesis 3](#), according to which relational-type firms, i.e., SOs and FOs, reinvest with a lower probability (compared to transactional-type firms, i.e., POs) in the same country after closing a subsidiary.

The differences in probability are large and statistically significant also when the comparison between SOs and FOs is examined through a conventional Wald test. These findings generate a clear-cut ranking in the propensity to reinvest by our three categories of firms. POs are the most inclined to reinvest, followed by FOs and finally SOs, which exhibit a strong reluctance to reinvest in the same country after having closed a subsidiary. This ranking is consistent with our [Hypothesis 4](#), which is supported even more strongly than

Table 4
Divestment models – robustness checks.

	CPHM	Additional controls		Dropping experience variables	Host country dummies
	(1)	(2)	(3)	(4)	(5)
FO	0.526*** (0.128)	−0.008** (0.004)	−0.006** (0.003)	−0.006** (0.002)	−0.005 (0.003)
SO	0.137*** (0.099)	−0.029** (0.012)	−0.027*** (0.008)	−0.014** (0.006)	−0.016** (0.007)
Firm_liquidity		−0.004 (0.003)			
Firm_debt		−0.000 (0.000)			
Firm_ROI			0.000 (0.000)		
Firm level controls, except for experience	Yes	Yes	Yes	Yes	Yes
Firm level controls, only experience	Yes	Yes	Yes	No	Yes
Country level controls	Yes	Yes	Yes	Yes	Yes
Investment level controls	Yes	Yes	Yes	Yes	Yes
Country dummies	No	No	No	No	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
Timespan dummies	No	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Investments	2240	1730	1966	2166	2240
Observations	14,560	7497	10,471	13,778	14,560

Standard errors in brackets. ** and *** denote significance at the 5% and 1% level, respectively.

Hypothesis 2 due to the fact that the differences in the probability of reinvesting between SOs, FOs and POs are in this case always statistically significant.

Similar to what done in column (4) of [Table 3](#), in columns (3) and (4) of [Table 5](#), we consider a model in which the probability of reinvesting in the same country after the sale of a foreign subsidiary is analyzed. Results indicate that the probability of FOs reinvesting does not significantly differ from that of POs. Only SOs exhibit a significantly lower (compared to POs) probability of reinvesting after the sale of a foreign subsidiary. If we combine these results with those shown in column (4) of [Table 3](#), we get a confirmation that sunk costs (which are higher in situations leading to subsidiary shutdown) drive relational owners' reluctance to divest and subsequently to reinvest in the same country in case of divestment.

5. Discussion of results

In this paper we argue that the fundamental mechanism that triggers reluctance both to divest an underperforming subsidiary and to reinvest later in the same host country is the sunk costs incurred in the past and expected in the future, which act as a barrier to both exit and re-entry ([Baumol et al., 1982](#)). The key point is that sunk costs depend on the controlling owners' relational commitment to the firm, and that such a relational commitment depends on factors that distinguish relational from transactional owners, namely, long-term orientation, multiple/complex goals, affective/calculative/normative commitment implying relation-specific investments ([David et al., 2010](#); [Aguilera and Crespi-Cladera, 2016](#)). These factors also imply higher barriers to exit/entry, thus leading to lower propensity for both divestment and reinvestment. Accordingly, the likelihood of both divesting from and reinvesting in a host country decreases as one moves from POs to FOs, and finally SOs. The empirical results support our hypotheses by confirming the ranking in the likelihood to divest and by showing the existence of a marked divide in the likelihood to reinvest (in the same country) between POs and FOs, on the one hand, and the latter and SOs, on the other.

It is worth observing that, according to our conceptual framework, these results hold when referring to failure divestments, as distinct from other restructuring divestments, and after controlling for several factors considered by extant literature as key antecedents of divestment/reinvestment decision-making choices. In particular, we find that firm-level controls influence both divestment and reinvestment decisions.

As a complement, the following evidence emerges at the firm level. In line with previous studies, experience does matter in foreign operations, including exit and entry (e.g., [Surdu et al., 2018](#); [Tan and Sousa 2019](#)). The experience gained in the host country contributes to reducing the probability of divestment, thanks to a learning process that reduces the liability of foreignness and therefore the probability of wrong choices. This also leads the firm to undertake reinvestments with a lower probability ([Zeng et al., 2022](#)). A long-standing experience gained internationally has a mixed effect: it reduces divestments, but favors reinvestments, probably increasing the firm's confidence in not to repeat previous errors. Interestingly enough, multiple subsidiaries in the host country increase the probability of both divesting and reinvesting, confirming that a multi-plant diversified production platform help significantly reduce the relevant costs of exit and re-entry, thanks to in-network ties and intra-firm factor mobility ([Song, 2014](#); [2021](#)). Finally, older firms divest and reinvest more, exhibiting a footloose behavior, probably thanks to their reputation and visibility status that favor access to capital and liquidity.

At the investment level, our evidence confirms previous largely convergent results (for a recent review, see [Schmid and Morschett,](#)

Table 5
Reinvestment models.

	After subsidiary shutdown		After subsidiary sold	
	(1)	(2)	(3)	(4)
<i>FO</i>	−0.419** (0.206)	−0.647*** (0.153)	0.011 (0.064)	0.032 (0.065)
<i>SO</i>	−1.036*** (0.331)	−1.720*** (0.343)	−0.584*** (0.199)	−0.437** (0.196)
<i>Host_exp_time</i>	−0.180** (0.046)	−0.374*** (0.100)	−0.137*** (0.040)	−0.118*** (0.039)
<i>Int_exp_width</i>	0.417*** (0.148)	0.569*** (0.185)	−0.064 (0.043)	−0.035 (0.048)
<i>Int_exp_time</i>	0.154** (0.076)	0.207 (0.172)	0.064 (0.049)	0.068 (0.044)
<i>Firm_size</i>	0.003 (0.019)	0.050 (0.034)	0.032** (0.015)	0.009 (0.021)
<i>Firm_age</i>	0.233** (0.097)	0.321*** (0.079)	−0.003 (0.026)	0.039 (0.034)
<i>Firm_listed</i>	−0.270*** (0.071)	−0.396** (0.199)	0.049 (0.085)	0.187 (0.120)
<i>Host_subs</i>	0.451*** (0.104)	0.685*** (0.139)	0.146*** (0.054)	0.125** (0.050)
<i>GDP</i>	0.096 (0.066)	0.197*** (0.047)	0.011 (0.030)	0.011 (0.024)
<i>GDP_growth</i>	−0.022** (0.009)	−0.035*** (0.009)	0.008** (0.003)	0.007* (0.004)
<i>Country_risk</i>	−2.695*** (0.917)	−5.329*** (1.473)	0.602** (0.251)	0.478** (0.206)
<i>Cultur_distance</i>	0.452*** (0.157)	0.785*** (0.173)	−0.051* (0.028)	−0.038 (0.036)
<i>Geogr_distance</i>	−0.064 (0.067)	−0.243*** (0.068)	0.024 (0.047)	0.022 (0.041)
<i>Acquisition</i>	−0.016 (0.048)	−0.181 (0.125)	0.115** (0.050)	0.141*** (0.046)
<i>Minority</i>	−0.095 (0.102)	−0.324** (0.153)	0.104 (0.100)	0.207* (0.133)
<i>IMR</i>	0.102 (0.165)	0.589** (0.268)	0.201 (0.147)	0.437** (0.200)
Timespan dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Observations	178	178	204	204

Standard errors in brackets. *, ** and *** denote significance at the 10%, 5% and 1% level, respectively. Columns (1) and (3) report results of models where timespan investment dummies from t_{inv4} to t_{inv12} are used as exclusion restrictions, whereas columns (2) and (4) report results of models where timespan investment dummies from t_{inv6} to t_{inv12} are used as exclusion restrictions.

2020): (restructuring) divestments are more likely if the entry mode was an acquisition of a local unit rather than a greenfield, while they are less likely when the parent firm owns the majority of the shares in the local unit.

6. Contributions, limitations and future research avenues

The main novelty of the paper is the proposal of a conceptual framework that not only responds to the research call for more studies on post-divestment strategies, but also offers a unified framework that explains how firm divestment and reinvestment choices are interconnected and result from a consistent business strategy, reflecting the ownership heterogeneity and therefore the owners' commitment to the firm.

In so doing, we contribute to the theoretical debate in at least three directions. Scholars who seek to understand internationalization cycles and waves from a decision-making perspective often overlook that internationalization is a complex process where decisions of de- and re-internationalization do interact (Benito et al., 2012; Vissak and Zhang, 2015; Vissak et al., 2020). In other words, studying divestments and reinvestments in isolation from one another has so far precluded the possibility of identifying the determinants shared by the two opposing decisions. In addition, our paper strengthens the stream of research investigating the role of firm ownership and governance in international strategy choices (Aharoni et al., 2011; Aguilera et al., 2019). Finally, we discuss and show the relevance of barriers to both de-internationalization and re-internationalization, a topic that has so far attracted scant attention in the extant literature (Tang et al., 2021).

Our work is not exempt from limitations that, however, may pave the way to a rich future research agenda.

First, we are aware that mapping firms into categories may give rise to over-simplification, especially since it overlooks the variety

within categories. For instance, when considering FOs, firms can be distinguished according to the involvement of controlling families in management. In family managed firms, multiple goals encompass the desire to guarantee family members managerial and/or executive positions (Jeong et al., 2022). Moreover, being involved in strategy formulation and implementation, family owners are likely to make other side bets, i.e. to engage in consistent lines of activity (foreign activities in specific locations, product lines, etc.) that are valuable to the family and are contingent upon a long-lasting bond with the family business and its ramifications (Berrone et al., 2012). These considerations make the relational commitment in family managed firms clearly different from that in family-owned firms.

Second, one can think of quantitative indicators to measure the relational ownership at the firm level. However, there is no consensus on which indicator should be used. Some scholars propose measures based on the share of voting rights of relational owners or thresholds relating to the capital share and the length of the holding period (e.g., Gordon, 1994; Bhagat et al., 2004; O'Brien and David, 2014; Zeitoun and Pamini, 2015). However, the ability of these indicators to capture the concept of relational ownership, which is inherently multidimensional, has been disputed (David et al., 2010; Mariotti and Marzano, 2020). Somehow more promising may be approaches that use confirmatory factor analysis or principal component analysis to derive one-dimensional constructs from the set of elements that qualify the nature of relational ownership (i.e., long-term orientation, multiple goals, commitment). Here the difficulties are both conceptual and empirical. Indeed, it is not easy to find quantitative proxies for variables like multiple goals and commitment. Furthermore, for studies that require a large sample of firms over a long observation period (such as the investment-divestment-reinvestment sequence), firm-level data is hard to collect. However, future research must try to meet this challenge by proposing empirically feasible and all-encompassing measures of relational ownership.

Third, corporate ownership may be more or less concentrated, thus making firms more or less exposed to agency costs and in turn to the decision of divesting low performing subsidiaries. Since we do not control for ownership concentration, our estimates can be potentially biased. Despite the fact that this problem is mitigated in the Italian context by low concentration variability (generally corporate ownership is very much concentrated) and the fact that we control for listing (in Italy, the most frequent reason for ownership dilution), the lack of comprehensive information on firm shareholders is a limitation of the paper.¹⁵

Fourth, both in the conceptual and the methodological sections, we explain why we only consider medium-term reinvestments (i.e. within five years from the divestment). Research efforts can be made to loosen time constraints, so as to consider the possibility that the firm may reinvest in the same country over a longer period. However, this would imply a different research perspective. In fact, in the long run, the conditions of the business environment of the host country are likely to change, so that the firms' strategy adjustments to the new context cannot leverage prior business relationships and experiences (Peng, 2003; Xia et al., 2009). Furthermore, the memory of the divestment trauma and related sunk costs will tend to evaporate, while other organizational learning and unlearning related to international context may emerge. In this perspective the divestment-reinvestment nexus can break or weaken. The conflicting results in the literature as to whether firms learn (e.g., Tan and Sousa, 2019; He et al., 2018) or fail to learn (e.g. Madsen and Desai, 2010; Cannon and Edmondson, 2005) from the stock of knowledge from prior entries are indicative in this regard.

Fifth, firms' investment and reinvestment choices may vary by entry mode and ownership (e.g., switching between greenfields and acquisitions, or changing participation in subsidiary's equity). Also, re-internationalization may involve the use of a different mode of operation from the foreign direct investment (e.g., export, non-equity alliances; see Surdu et al., 2019). In our work, we do not consider changes in entry mode, mainly due to the small number of cases. Likewise, we do not consider re-entries different from investment. These changes can be strategic reactions to sunk costs that deserve more attention in future research.

Finally, although Italy is a particularly interesting context in which both family and state-owned enterprises are significantly present (Boellis et al., 2016; Mariotti and Marzano, 2019), our single-country sample may restrict the generalizability of our findings. Thus, the empirical setting can be fruitfully enlarged to other countries (e.g., advanced versus emerging countries), to test the role of local specificities and generalize the results.

Author statement

Sergio Mariotti: Conceptualization, Writing - Original Draft, Writing - Review & Editing, Investigation, Supervision. Riccardo Marzano: Conceptualization, Writing - Original Draft, Writing - Review & Editing, Methodology, Software, Formal analysis, Data Curation. Lucia Piscitello: Conceptualization, Writing - Original Draft, Writing - Review & Editing.

Data availability

The authors do not have permission to share data.

¹⁵ We thank a reviewer for pointing out this limitation.

APPENDIX

Table A1

Investments by industry

<u>Industry</u>	FOs	SOs	POs	TOTAL
Food products, beverages and tobacco products	168	0	32	200
Textiles, clothing, leather and related products	144	0	11	155
Wood and wood products	17	0	0	17
Paper and paper products	33	0	3	36
Chemicals and chemical products	135	0	22	157
Pharmaceutical products and preparations	64	0	1	67
Rubber and plastic products	128	0	43	171
Other non-metallic mineral products	203	0	15	218
Basic metals and fabricated metal products	242	2	56	300
Computer, electronic and optical products	86	74	45	205
Electrical equipment	140	5	76	221
Machinery and mechanical equipment	278	7	53	338
Motor vehicles and other transport equipment	191	38	24	253
Furniture	19	0	4	23
Other manufacturing	47	3	10	60
TOTAL	1897	129	395	2421

Table A2

Investments by entry mode, ownership and host country

Panel A – Investments by entry mode and ownership				
	FOs	SOs	POs	TOTAL
<u>Entry mode</u>				
Acquisition	965	94	276	1335
Greenfield	932	35	119	1086
<u>Ownership</u>				
Majority-owned	1597	79	351	2027
Equally-owned	129	29	11	169
Minority-owned	171	21	33	225
Panel B – Investments by host country				
	FOs	SOs	POs	TOTAL
<u>Host country</u>				
Belgium	18	3	6	27
Brazil	76	2	13	91
Canada	29	2	9	40
China	231	5	42	278
Czech Republic	31	0	4	35
France	131	8	22	161
Germany	173	8	28	209
India	112	0	7	119
Mexico	47	0	6	53
Netherlands	28	2	12	42
Poland	82	3	12	97
Romania	75	2	5	82
Russia	55	4	12	71
Slovak Republic	34	0	8	42
Spain	76	2	21	99
Switzerland	35	2	4	41
Sweden	22	1	3	26
Turkey	48	1	5	54
United Kingdom	62	25	20	107
United States	149	50	48	247
Others	383	9	108	500

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