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Driving internationalization through business model innovation: evidences from an AgTech company

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Driving internationalization through Business Model Innovation: evidences from an AgTech company

Abstract

Purpose: This paper investigates how a firm may innovate its business model to internationalize.

Design: Due to its novelty and to the depth of the investigation required to grasp the mechanisms and logics of business model innovation aiming at internationalization, a single case study has been performed related to a company located in North-Western Colombia.

Findings: We provide detailed empirical evidences over the mutual connection and complementarities among value mechanisms of business models. Moreover, our study suggests that BMI fosters internationalization to scale, which in turn will require additional changes to match new customer needs as they emerge. Also, the study shows an extension of the action-space of Lean Startup Approaches, intended as scientific approaches to international entrepreneurship.

Originality/value: This study connects business model innovation and internationalization as few studies have done before.

Keywords: Internationalization, Business Model, Business Model Innovation, Lean Startup, Experimentation, Entrepreneurship

1. Introduction

Internationalization is often a mandatory choice for entrepreneurs and managers dealing with scarce resources. International business literature recently emphasized the connection between internationalization and business model (see Hennart, 2014; Rask, 2014). The business model (BM) is intended as the “architecture of the value creation, delivery, and capture mechanisms [a firm] employs” (Teece, 2010, p. 191); and extant research is converging towards a common understanding of BMs as construct to unify a supply-side and a demand-side view of the firm (Massa et al., 2017).

The BM could hence become the unit of analysis to investigate the internationalization process from a novel, holistic view.

In line with this BM perspective, scholars suggest that business model replication may not be enough while internationalizing; instead, evolving, adapting and innovating the BM through experimenting has been considered a key driver for a successful internationalization (Dunford, Palmer and Benveniste, 2010). Teece (2007, 2010) argues that introducing change and innovate the business model is a powerful tool for enhancing firms' competitiveness.

Notwithstanding these promising touchpoints between international business and business models, the field currently shows limited understanding of whether and how organizations can use business model innovation (BMI) to foster a successful internationalization process. Enhancing our understanding over the role of business model innovation as driver for internationalization process is then important, given that: (i) few studies explain in detail how business model innovation connects with an internationalization process (Dunford, Palmer and Benveniste, 2010; Child et al., 2017); and (ii) for many managers and entrepreneurs, internationalization is a mandatory choice. In view of these arguments, this paper addresses the following overarching question: How can innovation in and between the value mechanisms of a business model foster internationalization?

Due to its novelty and to the depth of the investigation required to grasp the mechanisms and logics of BMI aiming at internationalization, our research question warrants for qualitative research methodology. Specifically, we conducted a single case study based on qualitative interviews and additional triangulated sources related to a company located in North-Western Colombia.

In this study, we will provide at least two contributions. First, we offer detailed empirical evidence concerning the mutual connections and complementarities among value mechanisms of BM. Second, we advance extant knowledge over the relationship between internationalization and business model innovation. This significantly extends the literature that has predominantly focused on internationalization without considering a business model innovation perspective.

2. Business Model and Internationalization

After more than fifteen years of research, a widely acknowledge definition emerged of what a business model (BM) is: that is, the “architecture of the value creation, delivery, and capture mechanisms [a firm] employs” (Teece, 2010, p. 191). Specifically, value creation should be operationalized as introduction of innovative offerings (e.g. Abrahamsson et al., 2016); the ability to be profitable is what typically defines the value capture mechanism (e.g. Clauss 2017), thus, including Cavallo et al., (2019). *Driving internationalization through business model innovation: evidences 3 from an AgTech company*

revenue models and cost structures; while value delivery includes those activities to reach customers and partners, such as distribution mechanisms and channels (e.g. Cortimiglia et al. 2016). The success of this construct stems from its holistic nature as description of a firm's key business processes and how they are linked (Zott et al., 2011).

Beside its definition, a dynamic view of the BM is gaining a lot of attention from scholars across many different research fields. As noted by Teece (2010), a static view of firm's business model may represent the premise for business stagnation. There is need for a dynamic capability perspective, which suggests that firms should adapt and renew their business model to stay competitive (Teece et al., 1997). Starting with the seminal work of Mitchell and Coles (2003), BMs may change over time by involving a single business model element (improvement), or many different elements (replacement), till embracing a continuous changing phenomenon and finally leading to what might be considered as business model innovation (BMI). There is an ongoing debate on whether we should generally talk more about BM change, adaptation, renewal, development and so on rather than using (or abusing) the term "innovation" (Spieth et al., 2014; Saebi et al., 2017). Following this fragmentation, research is still debating on conceptual clarity around BMI (Ritter and Lettl, 2018; Foss and Saebi, 2017). According to Abdelkafi et al. (2013, p13) BMI happens "when the company modifies or improves at least one of the value dimensions". In a similar vein, Foss and Saebi (2017, p. 201), based on Teece's definition of BM (Teece, 2010), argue that we may generally talk about BMI, even though recognizing BMI may vary consistently in terms of novelty and scope. Thus, borrowing from Foss and Saebi (2017, p.201), we will refer to BMI as "designed, novel, non-trivial changes to the key elements" of a firm's business model and/or the architecture linking these elements". The Business Model Innovation process is first of all a "change phenomenon" which, if characterized by some degrees of novelty or uniqueness comparing to already existing solution in the market, can lead to a business innovation process (Massa and Tucci, 2013). Thus, each occasion of change represented a suitable and academic relevant research context to explore.

When dealing with BMI, several scholars started focusing on new ventures which, in their early stages of their development, frequently undergo change and innovation (McDougall & Oviatt, 1996). Others considered large corporations as those company mainly in need to change and evolve their business (Achtenhagen et al., 2013). While recently, others are centering their attention on BMs in the digital context (e.g. Autio et al., 2018; Ghezzi and Cavallo, 2018).

A great occasion for change, adaptation and innovation is also represented by the internationalization process (Rialp et al., 2005). Dunford et al. (2010) have examined business model replication across

international markets. Casadesus-Masanell and Ricart (2010) argue that firms may adapt rather than replicate their business model while entering in new markets. Johansson and Abrahamsson (2014) analyze how continuous business model innovation can be used for international growth over time. The topic is gaining an increasing attention from international business scholars (e.g. Hennart, 2014; Zarei et al., 2011). See for instance Rask's ambitious attempt (Rask, 2014) to conceptualize internationalization through BMI in four models. In a similar vein, Child and colleagues (2017) find three models for international business model innovation (i.e. traditional market-adaptive, technology-exploiter, and ambidextrous explorer). Also, Hennart (2014), provides a valuable contribution by using BM as explanatory factor of born global firms.

The nexus between business model innovation and internationalization is clearly connected with the competitive advantage construct. Concerning this point, Casadesus-Masanell and Ricart (2010) and Ricart et al. (2004) already shed light over the nexus between strategy concepts (such as BM) and international business, since sources of competitive advantage (like resources and knowledge) have their analogs in international business literature.

Despite the valuable effort put forward by scholars, research gaps remain. To date, research failed to fully exploit the relationship between BMI and internationalization, due to the relatively young and emerging nature of business model stream, which has hindered this relevant research direction. For years, indeed, the business model construct has been characterized by fuzziness and unclarity in terms of its definition and components (Massa et al., 2017), and similarly this fragmentation applies to the BMI stream (Massa and Tucci, 2013). Moreover, limited research exists with reference to how change and innovation of BMs can be performed. As a result, scholars alike are calling for the development of approaches to further explore the relationship between BMI and internationalization (Abrahamsson et al., 2016).

3. Methods

3.1. Research Design

Qualitative approaches facilitate the understanding of complex phenomena (Yin, 2009), such as business model innovation (Massa and Tucci, 2013) and internationalization (Hennart, 2014). Furthermore, given the early stage of development of research linking BMI and Internationalization, such an approach was felt to be necessary (Gartner and Birley, 2002; Miles et al., 2013). In particular, we choose the single case methodology for two main reasons. First, we were able to investigate an

under-explored phenomenon at various levels without being constrained by initial decisions over the tools or types of data to use (Eisenhardt, 1989; Yin, 2013). Second, studies pointed out the need to investigate the process of business model innovation (Dunford et al., 2010; Winter and Szulanski; 2001) in a detailed, and comprehensive way.

3.2. Industry and case selection

To cope with our research goals, we sought out an industry and then a firm that relies on internationalization to create and capture value from innovation. Moreover, this firm should have had implemented specific changes to the ways it conducted business while internationalizing.

We decided to focus our attention on the Agriculture industry for several reason. First, agriculture has a worldwide importance¹. Second, emerging technologies are opening up vast opportunities for innovation in the sector and are rapidly transforming parts of the global agriculture industry and leading to the emergence of AgTech², which is attracting massive venture capital investment (Startup Genome, 2018). If few are the contributions linking BMI and internationalization, to our knowledge, no study has used this empirical setting as of yet. In addition, the very recent emergence of AgTech (as agriculture sub-industry) is a further reason which warrants for qualitative and in-depth case study.

This study analyzes the case of a leading AgTech Colombian company. To ensure anonymity, we will refer to the firm analyzed with the following pseudonym: Bio&Agro. Multiple reasons led us to the choice of this case. Frist, this company comes from a “traditional” – that is, not innovative – industry such as agriculture. Second, it has stood out of the crowd by developing an innovative business model in terms of value creation (benefits to customers) and value delivery (additional services that enhance the customer experience beyond the technical aspects of the offer), thus representing an intensive case. Hence, the identification of this firm has followed theoretical and convenience sampling criteria (Voss, et al., 2002). The firm has been able to develop innovative products leveraging its country’s unique biodiversity and then ensuring better performances through

¹ Half of the total world population lives in rural areas (FAO, 2012) and employs 1 billion people and contributes \$3.2 trillion annually to global output (Startup Genome, 2018) and as much as 30 percent to gross domestic product (FAO, 2018, 2012).

² Agtech is scientifically-driven farm practices, equipment or processing including bio-engineered/transgenic crops, proprietary breeding, GPS/precision ag, water management and improved equipment, conservation-based best management practices, food manufacturing and related advancements (World Water Development (WWDR) Report 2015)

an efficient internationalization process. Hence, we deem Bio&Agro an academically relevant case, consistently with our research question.

3.3. Data Gathering

Validity and reliability of a single case study is closely connected with the correctness of the information provided by the interviewees and it can be assured by “looking at data in multiple ways” (Eisenhardt, 1989; Yin, 2013; Gibbert et al., 2000). Thus, multiple sources of information have been employed, including interviews, internal documents, websites and other secondary sources. Primary data source consists in 16 semi-standardized interviews (13 interviewees, 3 of whom were interviewed twice) involving the entrepreneur-owner, R&D Director, Marketing Director, project managers and team members from Bio&Agro’s headquarter in Antioquia (Colombia). And, two interviews were conducted with the Chief Operating Officer (COO) and Sales Director of Bio&Agro’s main external partner, later presented (Section 3.5). Interviews lasted approximately from one hour to one and a half hours and resulted in 127 pages of transcripts. Interviews were all conducted face to face at the firm’s headquarter. Eleven interviews were recorded and then immediately transcribed to ensure the quality of the data (Gibbert et al., 2000), while the other 5 interviews, notes were taken manually during the interview and then transcribed. A back-translation process was used to ensure reliability following Brislin (1970). In accordance with our research question, the interviewees were asked to describe and comment on the Business Model Innovation process undertaken by the firm while internationalizing. As a result, a first set of questions regarded the initial working version of their business model (including questions such as: “What was your value offering? How did you organize your firm to create and deliver your value offering to your customers? Were you already making a profit (i.e. capturing value)?”). These questions were based on the widely accepted conceptualization of three main mechanisms (value capture, value creation, value delivery) of a BM, as also provided in our review of the literature (Clauss 2017; Cortimiglia et al. 2016; Saebi, Lien and Foss, 2017; Teece, 2010). Following, a second set of questions looked more closely at the internationalization process, useful to get descriptive information over the evolution of the firm, thus, including questions like: “What are the new markets are you entering? Why did you choose these countries?”; “How did you enter these markets? Export, Licensing, opening new plants/subsidiaries abroad? “Why are you entering in other markets?”). Finally, the third set of questions was centered on the core of this study: business model innovation process. Thus, based on Foss and Saebi’s (2017) concepts on BMI, we asked questions like: “What are the main changes to your firm concerning the way you create, deliver and capture value? Why did you make these

changes?”). The protocol was updated after preliminary interviews, and then regularly, till reaching the current form, to avoid redundancy in evidences demonstrating saturation, so as to include and leave more space to further specific details, as well as additional emerging and not yet addressed findings about the ongoing collaboration. Moreover, to avoid any misunderstanding and ensure confidence in data collected, we also provided the interviewee with a key including an explanation of the three main value mechanisms. These practices allowed to move from abstract or technical concepts, to the underlying managerial implications and business logics nurtured by concrete examples. As secondary source of data, we collected information from internal documents (e.g. presentations, emails, reports, additional memos and minutes from meetings) and external documents. Financial data were also collected (mainly from Bloomberg and Thomson Reuters) to observe changes in performances before and after the internationalization. Table 1 summarizes all data sources considered for this study. Our data collection ended once conceptual saturation was reached (Bowen, 2008).

Table 1. Data Source

<i>Method</i>	<i>Data Type</i>	<i>Quantity</i>	<i>Original data source</i>
			Three interviews with three informants of Bio&Agro (Entrepreneur-owner; Marketing Director; R&D Director);
	Semi-standardized Interviews	16	Two interviews with two informants of ReverseAgro (COO ReverseAgro; Sales Director)
Single Case study			Five interviews with five informants of Bio&Agro (Project Managers, Product Specialist)
	Internal Documents	9	Presentations, Reports, Meeting minutes, notes, memos.
	External Documents and sources	33	Company website, news articles, industry report, Bloomberg, Thomson Reuters, LinkedIn.

3.4. Data Analysis

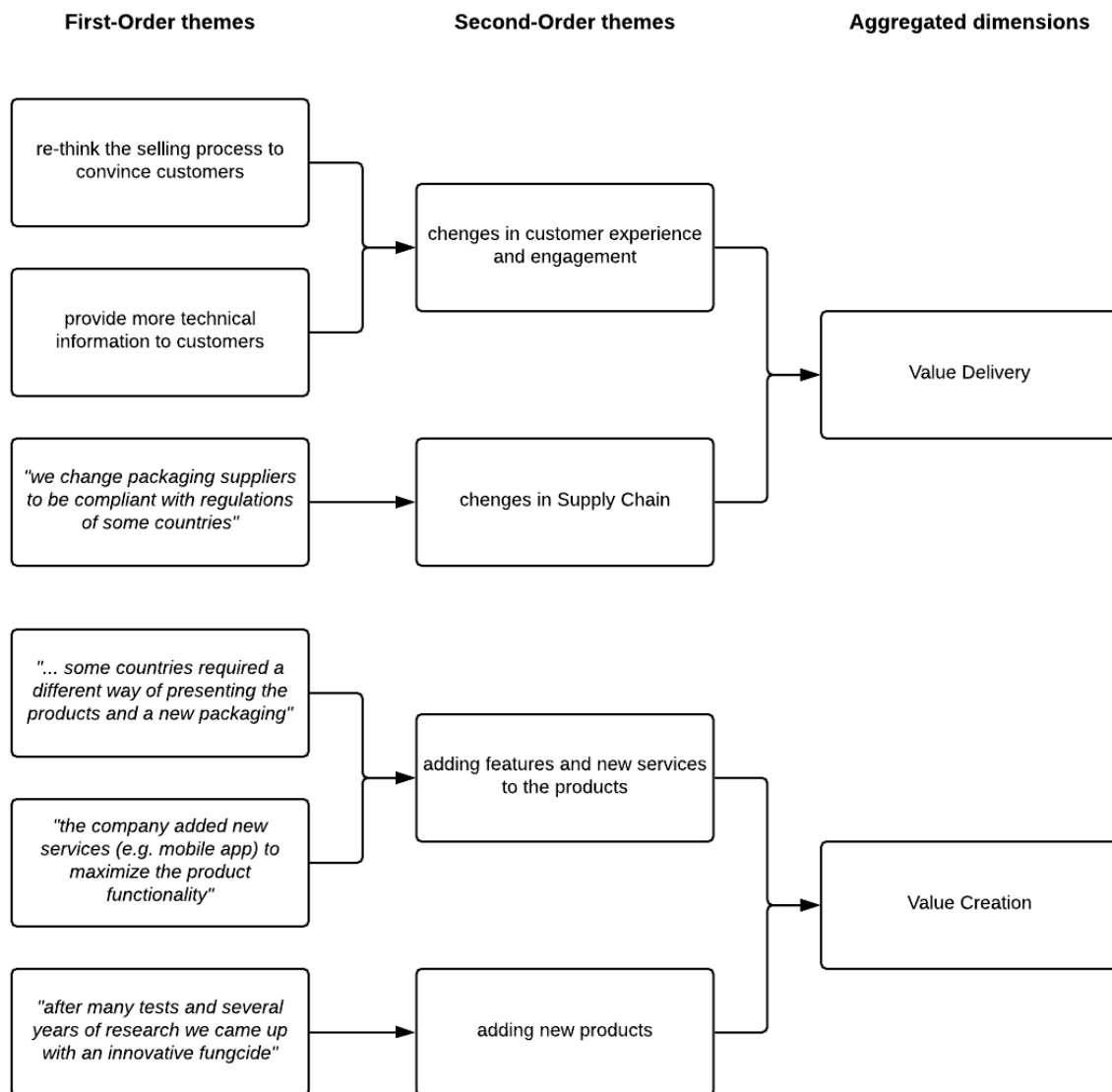
We performed coding through textual analysis while a software was used as archive. Both in-vivo and constructed codes³ (Glaser and Strauss, 1967) led to the identification of the first-order (or “core”) categories, based (and not limited) to the theoretical background by applying the ‘open coding’ interview transcriptions (Corbin and Strauss, 1990). Overall, the coding process was inspired by the method proposed by Gioia et al. (2010; 2013), and, included all the empirical materials both from primary and secondary sources. Figure 1⁴ illustrates an example of data structure process leading to the identification of aggregate/overarching dimensions while starting from the ‘core’ categories used. For instance, “we changed packaging suppliers [...]” served as an in-vivo code directly taken from an interview’s quote, while ‘rethink the selling process to convince customers’ was induced or constructed by the researcher from an analysis of the interviews’ transcriptions, as recommended by the open coding process. The second order themes emerged as the researchers further grouped first-order themes around a set of categories that allowed to view the data at a higher level of abstraction. Eventually, second order themes were grouped into overarching dimensions, which, due to their direct relevance when addressing the study’s research questions, represent a synthesis of the key themes emerged from the case (e.g. ‘changing the packaging’ and ‘adding a mobile app to increase product functionality’ were considered actions to add features and new services to the product; this was hence contrasted to the BM conceptual components, and interpreted as a change in value creation).

Concluding, results were analyzed and then confirmed by the interviewees, to avoid any error or bias and ultimately enhance the correctness of our interpretations.

³ The complete list of codes employed is available upon request.

⁴ Figure 1 is not intended to be a causal or dynamic model explaining the findings but, rather, is a representation of the data structure process (Gioia et al., 2010).

Figure 1. Data Structure



3.5. Case Description: Bio&Agro

Bio&Agro is a family-business company founded in 1998 and located in eastern Antioquia, in Rionegro, Colombia. Bio&Agro was founded to produce and market bio-inputs derived from natural products from unique Colombian biodiversity. The first line of business of bio-inputs were for the food, cosmetic and cleaning sector. This line started with the development of a blue natural dye obtained from the Jagua or Genipa Americana, as it is known scientifically to this tree present in the jungles of Chocó. Its fruit has been used for centuries by the tribes of the region as a temporary natural

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dye. After five years of research, Bio&Agro, with the support of its team of researchers, the University of Antioquia, the Espavé Foundation and local organizations and actors, managed to develop various coloring products from the Jagua. They started selling their product to the neighbors and they realized that this product had a market. They installed their plant and equipment, and the formulas were more standardized, but it was not yet an industrial and well-structured plant. In addition, they saw the opportunity to bring this type of healthy products, to a line of home in what refers to gardening, using formulas with lower concentrations and also to the line of cleaning. Indeed, dyes and other natural extracts were used for household cleaning products (e.g. detergents, disinfectants). The products began to be marketed and the company increased its formally hired employees.

The owners had also other types of businesses, such as farms, in which many chemical products were used to protect crops from weather and insects. They realized that the quantity and “*number of chemicals used in crops was increasing day by day, not certainly a healthy solution for people and the environment*” (using the very words of the entrepreneur-owner). As a result, the R&D team and the owners considered both the need and the business opportunity to bring natural active ingredients and novel bio-inputs also in agriculture industry. A second promising line of business was launched for natural products to protect crops such as cut flowers, vegetables and fruit trees from pests (e.g. insecticides, repellents and acaricides). This business line goes under the AgTech “umbrella”. What followed was the creation of an additional production plant. Sales in Colombia were growing and the first samples sent to Ecuador showed great potential for international expansion, but Bio&Agro lacked the capacity and resources to maintain the export chain. In 2008 the president of the company considered Bio&Agro had unexpressed growth potentiality and needed alliances to enter in other markets.

The impressive growth of demand for AgTech products convinced the owners and his managers to focus their strategy on this promising business line, while gradually dismissing the other line (in cosmetics and home). After a strategic analysis over the weak and strong points of the company in AgTech, they decided to look for partners. Specifically, Bio&Agro was developing innovative capabilities and products but showing no growth in sales, together with lack of financial resources to enter new markets (many countries require expensive certificates that Bio&Agro could not afford at that time).

To cope with such issue, Bio&Agro found an important partner: ReverseAgro⁵, a US-based multinational company specialized in protection of crops. ReverseAgro exhibits annual revenues in a range between 250-350 US million dollars, from 10 to 15 production plant, and between 800 to 1,000 employees. The alliance allows both companies to bring their strengths together. From one side Bio&Agro brings the innovative expertise and capabilities, while ReverseAgro offers commercial expertise, distribution channels and financial resources to get certifications needed to export Bio&Agro products in other countries in exchange for revenue sharing agreement. An exception is made for Colombia, where all revenues go to Bio&Agro, even though the collaboration is operatively active also in Colombia. More importantly, the alliance is driving the internationalization through a business model innovation process of Bio&Agro.

Today, Bio&Agro is specialized in developing bio-fungicides and bio-insecticides from plant extracts. The firm exhibits annual revenues in a range between 6-10 US million dollars, from 3 production plants, between 50 to 70 employees, 7 patents registered (in Ecuador, Perú, Costa Rica, Colombia, US, Mexico, Spain and Germany) and other 8 patents under registration process. Bio&Agro's products can be found in several countries: Colombia, Ecuador, Perú, Chile, Paraguay, Costa Rica, Dominican Republic, Mexico, U.S, Morocco, Germany and Taiwan.

4. Findings

4.1. Internationalization as a path to growth of niche-targeted products

The entrepreneur-owner of Bio&Agro demonstrated to be able to strategically orient the firm along its key development patterns. Bio&Agro started from the entrepreneur's intuition and a personal need. He felt the need for healthier products to have in his life and for his family. As the entrepreneur-owner put it:

“I was a bit horrified to see this increasingly massive use and over-use of chemicals, and, surprised at first that nobody was even complaining about it.

He also realized that bio-products could not be only more “*environment friendly*” compared to analogs made whit chemicals; rather bio-products had to be competitive also when it comes to price.

⁵ To ensure anonymity a pseudonym has been introduced.

From the very words of the entrepreneur-owner:

“when talking with other farmers I didn’t see absence of sensitivity to our own and our environment health. But, in our country, price is everything, educating and cultural change is not enough, we need to make our products competitive also in terms of pricing”.

Bio&Agro was then able to realize products that were proving to be better than their counterparts made with chemicals. In developing countries, the adoption of organic products in every industry may be very slow due to the financial constraints of families and entrepreneurs. Some entrepreneur would have been persuaded to dismiss his or her entrepreneurial project in such context. The Bio&Agro case shows the opposite: the context difficulties acted as stimulus for developing innovative products. As one of the first employee of Bio&Agro said during an interview:

“we needed to develop products good for the health and good for the wallet”.

Therefore, the role of the entrepreneur-owner was not only confined to the initial vision and intuition. He also had an executive plan clear in his mind. As regard, the entrepreneur-owner stated:

“at the beginning, I said to myself I need a plant, where do I get the money from?” I could not afford to building a plant from scratch. But soon I asked myself: do I really need a plant if I don’t know if out there Colombians would be willing to believe in bio-products and spend the same amount of money or a bit more than buying chemicals?

We had to start slowly, focusing on developing competitive products someone would buy”.

By interacting with his neighbors cultivating crops, he had a first market test. Neighbors were appreciating the environmental-friendly products. However, price was too important to sustain their business. Bio&Agro was then forced to further develop their products, optimizing processes and leveraging unique Colombian biodiversity in order to sell at a competitive price. After years of research and tests, they completed patents registrations and started to sell innovative products. The company was built following the increasing demand from customers, as revealed by the entrepreneur-owner:

“we had the equipment to produce, the formula but we didn’t have a formalized plant till the demand didn’t require it”

However, the sales were not growing, and the market was still a niche one. The products of Bio&Agro were still a bit more expensive than their analog with chemicals. The entrepreneur-owner and his management team considered that the time was up to change strategy. In particular, they decided to focus on applying their innovative capabilities in developing only products for agriculture, dismissing the others (e.g. cosmetics and cleaning). The choice was very simple according to one of the first external consultants (and today, Marketing Director) of the firm:

“we didn’t have resources, both people and money, to be really innovative and gain knowledge on different industries... with him (the entrepreneur-owner) we looked at our numbers, we looked at global market trends and we decided to focus on one industry of application for our product: agriculture.”

Narrowing the action-space of the company was also connected with the internationalization plan. As stated by the Marketing Director:

“before doing it [internationalization] my boss told me we can’t be greedy, all we need is to be very good at one thing”.

The internationalization started by exporting products in other countries in Latin America. Even in this phase of development, the entrepreneur-owner showed a very pragmatic approach. Before entering in new markets Bio&Agro went through several market tests in Ecuador and Chile. In addition, the entrepreneur-owner revealed what he had in mind since the beginning of this internationalization process:

“In Colombia we had our niche market, but we considered that our products could be sold also in other countries starting by those close to us.... but in my mind as my dream was to bring my products in developed countries in which I believed we could have even a better success due to their less sensitivity to price...since they clearly have more money to spend”

Difficulties emerged soon after the internationalization process started. Certificates to sell bio-products were expensive, as well as ensuring proper distribution channels. The entrepreneur-owner started looking for external sources of funding, starting with the local administrations and government agencies, without success. However, that was according to him a manifestation of luck:

“...I started to search for grant from our government: I didn’t get any. That was actually fortunate, since, most of the time you need money is when you need managerial advice also”.

Finally, a multinational US-based company showed interest on Bio&Agro products: ReverseAgro. This firm was specialized in crop protection products, seeds, and fertilizers by using chemicals, but had a real interest in knowing more about bio-products. However, ReverseAgro was missing innovative capabilities in organic products, and their customers seem more and more sensitive to environmental issues. As the COO of ReverseAgro stated:

“Bio&Agro is an open door to the future for us”

Moreover, it emerged clearly from interviews that a mutual collaboration was needed for both counterparts:

“I know they were my enemies but we don’t have the fire power yet to replace them, and they cannot ignore us since it’s where the world will go (the entrepreneur owner)”.

Bio&Agro started the collaboration to have financial resources to expand its operations in other markets. Specifically, financial resources were employed to buy registration approval/certificate to sell organic products (such as OMRI⁶ for US or CERES⁷ and ECOCERT for Central and South America).

Results at the beginning did not show significant improvements. The management team of Bio&Agro was of extreme help here, by suggesting to leverage ReverseAgro expertise as a multinational company, setting the partnership at a higher and strategical level. As regard the Marketing Director of Bio&Agro said:

⁶ Organic Materials Review Institute

⁷ Certification of Environmental Standards

“what was wrong? Simple, our entire strategy, but this is what I realized later thanks to our partner”.

In the following section, we delve more deeply into the changes implemented by Bio&Agro in order to face challenges of internationalization.

4.2. A Strategic Change: Business Model Innovation

Started with the goal to obtain financial support to get certificates approval for selling organic products, the collaboration with ReverseAgro, showed that other relevant synergies could be exploited. Bio&Agro started by leveraging the partner’s consolidated distribution channels to reach customers around the world. ReverseAgro also helped Bio&Agro to re-think the selling process. From the very words of Marketing Director of Bio&Agro:

“we were pretending that product would sell by itself with no specific particular effort; people willing to pay a bit more would buy; others, no matter what, would keep buying chemicals”.

“ReverseAgro helped us to realize that with a bit of commercial effort, our product could be sold to larger market that we were not yet capturing”

Bio&Agro was not having a proper control over the distributors that were selling its products to the final customers. How to use the product and relative benefits are at the very base of the value delivered to customers. The partnership with ReverseAgro as unique distributors over several countries made it easier, thus providing more information to the final customers offering consultancy over the maximization of product functionality. This strategic change led to an increasing demand and to enlarging the customer targeted. Marketing Director of Bio&Agro on this regard said:

“without even realizing it, changing distribution channels led us to change also our customers. We were shifting from niche market, made of “early adopters” (or hippy ones as I used to call them) to a much larger market”

ReverseAgro studied in detail whether the Bio&Agro products had some unexpressed potential. The key point they discovered was that Bio&Agro had put no big effort in studying how to maximize the [Cavallo et al., \(2019\). Driving internationalization through business model innovation: evidences](#) 16 from an AgTech company

use of its products. What followed was a period of study and testing in this direction, in Bio&Agro, till the point that a detailed instruction document for a better use of products was realized. BioAgro invested in this activity all their innovative capabilities and their chemical, physicochemical and microbiological long experience. As a result, ReversAgro was able to convince Bio&Agro that following specific instructions with their training the bio-products could be convenient also from an economic point of view. As R&D Director of Bio&Agro said:

“our technical review revealed that economic benefit was coming from the fact that farmers would use less quantity of our product; so even though you pay more at the beginning the product can be used more times compared to one made with chemicals”

In addition, Bio&Agro expanded its expert salesforce. When they started export in other countries, the selling process was left to the distributors and *“only for few large customers we were sending some of our expert that typically was a technician rather than a seller”* (Marketing Director). Then, after the shift to a unique distributor (ReverseAgro), a new salesforce made by sellers with knowledge over how to maximize the functionality of Bio&Agro’s product was established.

Changes were not only limited to and originated from the change of distribution channels. Internationalizing meant also adapting the value offered to the country-specific regulations. Some countries required that all the raw materials used by Bio&Agro needed to be organic. Thus, Bio&Agro changed some of its suppliers and the procurement chain. Changes of suppliers were also requested for instance to export in US or Morocco. As the Marketing Director said:

“US regulations requires a different way to present the product; while in Colombia we use corrugated boxes, US requires a white box with all the technical information”

“Morocco is also another case, since they have strict regulation about some raw materials; basically, one of the raw materials that we use has to come from Morocco”

As result, Bio&Agro had to change supplier in case of Morocco, the packaging supplier and, thus, a feature of the final product sold in US. In the US, Bio&Agro sells one of the main products with a different name compared to other countries for specific commercial purposes.

Moreover, developed countries (like US, Germany) showed interest and in some case formal request to build services around the innovative products realized by Bio&Agro. This led Bio&Agro to bring [Cavallo et al., \(2019\). Driving internationalization through business model innovation: evidences 17 from an AgTech company](#)

the collaboration with ReverseAgro even further. ReverseAgro indeed, already had the capabilities to develop software services such as mobile app, together with drone technology, to control for the effectiveness and advancement of specific treatments. Leveraging external partners to increase the value offering to the final customers by outsourcing knowledge expertise and resources of ReverseAgro was the right choice, according to the entrepreneur-owner:

“they (ReverseAgro) are expert in these new technological services, we can’t compete and when you can’t compete you collaborate; also, they are our distributors they have direct contact with our client more than us, so it was a logical decision”

A tangible benefit coming from this decision according to the Marketing Director is that, by having this strong partnership, they were able to focus on their strengths: innovation. Indeed, a new fungicide product has been developed recently.

In one of the last interviews, the entrepreneur-owner stressed the relevance of willingness of the company to embrace BM innovation besides recognizing the central role of finding the right partner.

“Overall, changing the way we do business was crucial to scale our internationalization process. Finding a good partner was essential, but only if it properly triggers other changes that our company was also able to embrace”.

The results and performances reached by Bio&Agro with these strategic changes while internationalizing are also worth mentioning. Specifically, revenue growth rate is 888% compared to the first year of internationalization. This happened thanks to the strategic change and decision operated by the company. In addition, the internationalization positive effect is evident also in the original domestic market of Colombia, where revenues growth rate is 226% (while it was 12% the first year of internationalization). Even considering that a share of this value is shared with the external partners, it is a great result achieved.

5. Discussion and Conclusion

5.1. Business Model Innovation and Internationalization

Bio&Agro proved that an effective internationalization process requires substantial changes and adaptation of the firm's BM. These changes were captured by the BMI perspective, providing a holistic overview through the internationalization process. To our knowledge, extant literature partially fails in adopting this perspective. Our research value is connected with the detailed analysis of the BMI process while internationalizing. Few studies have done this so far (see for instance the contribution provided by Dunford et al., 2010 and Casadesus-Masanell and Ricart, 2010). We were able to identify changes along all the three main BM's mechanism of value creation, capture and delivery, a perspective that only recently found agreement among scholars (Foss and Saebi, 2017; Teece, 2018), and, thus, not yet fully exploited in internationalization studies. Specifically, in accordance with Foss and Saebi (2017), evidence shows how these mechanisms are strictly correlated and interdependent. Also, we show how those changes emerge and connect with the internationalization process. Developing an innovative product, while narrowing the value offering, was considered a crucial step towards internationalization. The strategic decision to internationalize followed the need to maximize the market potential of an innovative product, since, the new and environmentally-friendly product could have much more appeal to customers outside Colombia than to domestic customers. However, after introducing the innovative product on the international market through a first market test, Bio&Agro realized that there was a need to innovate other components of its BM to make the most from the internationalization process. For instance, they needed new key partners to financially support and ensure proper distribution channels to Bio&Agro. By leveraging these new resources, Bio&Agro enlarged the customer base and was able to bring at scale the internationalization process. Scaling in international markets requires other changes to be made in order to match different customer needs. Some changes were introduced in the value delivery mechanisms, like introducing a new salesforce, and changing customer relationship. This, in turn, increased value offered to customers by providing them with more information and consulting services on how to better use the products. The innovation process continued, since some countries required changes on value proposition (new services and form of packaging) which translated in finding new partners and suppliers.

In sum, Bio&Agro case highlights that BM's components are not only connected but also interdependent. The initial new value proposition clearly connects with and requires innovation on other BM's value mechanisms and underlying components. Also, Bio&Agro had to change the way value offering presented for the US market, leading consequentially to change the packaging supplier. Changes and connections among changes regard also the value capture process and value delivery process, for two main reasons. First, changing the selling process, and providing more value to the

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customers, resulted in new revenue streams, a main component of value capture (Cortimiglia et al., 2016). Second, introducing new key partners for distribution such as ReverseAgro also a revenue sharing agreements which translated in connection between changes in delivery and capture mechanism. Similarly, by changing value delivery process entirely (i.e. leveraging on ReverseAgro for distribution and selling the product), Bio&Agro had more energy to invest in product innovation leading to a new value offering (a fungicide) to the market.

More importantly, our investigation shows that the overall BMI process had a clear impact on the scale of the internationalization. BMI process started with innovating the value offering and originated in the need of internationalizing and by the perceived threat to get stacked in niche or depressed market (Saebi, Lien and Foss, 2017). To properly internationalize, there is a need to change and innovate several components of the BM, which can then bring internationalization at scale while matching customer needs. The role of ReverseAgro as strategic partner was central to speed up internationalization. However, collaboration *per se* is not the solution for a successful internationalization. Besides, as the entrepreneur-owner acknowledges, the successful result is much linked to the continuous change and innovation of the BM which helped to better leverage the collaboration with a key partner. Furthermore, the need of internationalizing may arguably represent what is “sensed” in the dynamic capability framework provided by Teece (2018) which then leads to design and refine the BMI. More importantly, consistently with Foss and Saebi (2017), our study provides detailed empirical evidences over the mutual connection and complementarities among value mechanisms of BM, confirming once again an architectural view of firms’ BM (Teece, 2007, 2010, 2018), as complex and dynamic system (Massa and Tucci, 2013). Complexity, mutual connection and complementarities can be extended to the relationship between BMI and Internationalization process. The relationship is not linear and unidirectional: it is rather more complex than that. Our study suggests that BMI fosters internationalization to scale, which in turn will require other changes in the BM to match new customer needs. In accordance with Dunford, Palmer and Benveniste (2010), we argue that innovating and evolving the BM based on experimenting is a key driver for internationalization. The experimental approach has been at the very foundation of the entrepreneur-owner strategy. His approach was based on testing and feedback-change loops, which are indeed a dominant feature for complex systems (Sternan, 2000; Cavallo et al., 2018). As regards, qualitative methods are considered suitable to shed lights on under-researched complex system (Bennet and Elman, 2006; Hall, 2003; Maxwell, 2004). We encourage researchers to further investigate the topic also by means of quantitative and mixed-approaches, to mend at generalizability limitation.

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Bio&Agro also represents a successful case of BMI leading to improved performances. Here, few (although) valuable contributions already exist in this direction (e.g. Aspara et al., 2010; Zott and Amit, 2008). Future research is needed here to address the topic, leveraging quantitative methods (Foss and Saebi, 2017) and adopting emerging scales operationalizing BM (see for instance Child et al., 2017) and BMI concepts (see for instance Caluss, 2017, and, Saebi, Lien and Foss, 2017).

Research value also connects with the open debate over two different BMI strategies. Some scholars argue about the need for running multiple, parallel and partially conflicting business models (e.g. Casadesus-Masanell and Tarzijan, 2012). Others suggests to adopt a unique BM while aligning with shifting demand (e.g. Sosna et al., 2010; Doz and Kosonen, 2010). Our study shows how the latter strategy may result appropriate when firms - operating in the emerging AgTech industry - face internationalization. Bio&Agro, indeed, transforms the mechanisms of the primary business model in tandem with the external business environment (Hacklin et al., 2018). We recognize that a single case study presents limits while attempting to generalize the results. However, our research represents an original contribution since, to date, few studies investigated the relationship between BMI and internationalization. The decision to rely on a single case study is consistent to our study's goal, that is, to originally investigate BMI in connection with the internationalization process and look deep into specific complementarities between BM value mechanism – where the ability to identify and discuss such nuances could decrease as the empirical sample grows bigger.

5.2. A scientific approach for Internationalization

Results show the relevance of adopting strategic and scientific approaches to entrepreneurship in both early stages of development as well as for internationalization. Consistently with classical theory of entrepreneurship (Schumpeter, 1942) the entrepreneur-owner started from his intuition and creativity. However, soon emerged the need for a scientific execution plan made of experimenting and testing. Indeed, the entrepreneur-owner *started small*, building a first product to test the first customers he had: his neighbors running crop business. Then, only when he had a version of the product that someone was willing to pay, he started to *formalize its business* by building a plant and hiring employees. The process seems consistent with the Lean Startup Approaches (Ghezzi and Cavallo, 2018; Ries; 2011; Blank, 2013), and specifically with the Customer Development model (Blank and Dorf, 2012; Blank, 2013; Ghezzi, 2018). According to Blank (2013), entrepreneurs are first called to

“search” for a scalable and replicable business model by building a Minimum Viable Product⁸ and testing with a first group of customers. This search is followed by an execution phase, during which the firm consolidates and scales up their business model through customer creation and company building (Blank, 2013; Yang et al., 2018). More importantly, the study shows an extension of the action-space of Lean Startup Approaches, for two main reasons. First, Ries (2011) in its seminal work and later other scholars (Blank, 2013; Yang et al., 2018; Teece, 2018; Ghezzi and Cavallo, 2018), apply Lean Startup Approaches for early stages of development (i.e. startup) of a company. This study shows that the applicability can be extended also in later stages including the internationalization process. Internationalization started with a testing and experimenting phase in Ecuador together with a strategic decision to focus agriculture industry and later by increasing customer experience, by offering additional services (e.g. mobile apps) for maximizing the functionality of the main products. This process is in line with a lean principle to focus on a “core” function product/services rather than start soon to think of additional features (Ries, 2011; Blank, 2013). Therefore, this appears consistent with a general trend involving many new ventures that are succeeding around the world by focusing and becoming extremely efficient in delivering sometimes only one specific service to customers. Other companies like Amazon use a different strategy, expanding and diversifying their set of value offerings. There is no one best solution for everyone, timing is essential. Today, Amazon is everywhere because they have the resources and the scope economies to do so; at their early stages, they started with books and they kept their business narrow till reaching certain efficiency in terms of customer experience. Second, to our knowledge Lean Startup Approaches have been always considered a valid strategy for digital or software-related businesses (Ries, 2011; Blank, 2013), and recent studies are focusing on digital businesses as main empirical context (see Ghezzi and Cavallo, 2018; Balocco et al., 2019). Our study shows that the action-space of a scientific approach to entrepreneurship such as Lean Startup Approaches may include other industry such as agriculture and AgTech. More importantly it may apply to existing SMEs willing to grow and expand their business internationally, while dealing with the same concern as digital startup, i.e. resource constraints.

5.3. *Contribution to theory*

⁸ “the smallest set of activities needed to disprove a hypothesis” (Eisenmann et al. 2012, p. 2)

This study offers value for research in multiple ways. First, we adopted a Business Model Innovation lens to interpret internationalization process, as only few studies have done so far. Thus, building on recent literature (Massa et al., 2017), we argue that the BM could hence become the unit of analysis to investigate the internationalization process from a novel, holistic view.

Second, our study has strong focus on “how” Business Model Innovation entails changes in several elements of the BM, which appear to be clearly connected among one another and with internationalization. Specifically, we connected BMI and Internationalization and their relation as processes. We show how BMI may bring internationalization to scale, and, that a mutual and bidirectional relationship exists among them. We emphasize that, as BMI for internationalization is enacted, complementarities among the main value mechanisms that are part of the overall architecture of value play a paramount role. With reference to this, the original contribution of our study also provides the foundation for another point: while the notion of value capture, delivery and creation are known in BMI literature, bringing them together and connecting them explicitly with the Internationalization process is something that few studies have done as of yet (e.g. Casadesus-Masanell and Ricart, 2010; Onetti et al., 2012; Sainio et al., 2011; Rask, 2014). This is also due to the fact that these concepts are gaining agreement among BM scholars and literature only recently (Foss and Saebi, 2017; Teece, 2018), with few exceptions⁹. Finally, a great deal of researchers have been focusing their effort on investigating the degree of novelty introduced by BMI, leaving less attention on how changes in the BM are processed and implemented (Ghezzi and Cavallo, 2018). To this end, we extend the current debate by arguing that following Lean Startup Approaches and principles (e.g “starting small” or “get of the building”, experiment and test on customers) may apply also for small existing enterprises operating in agriculture industry willing to grow through internationalization. This extends the action space of Lean Startup Approaches, which are traditionally applied mostly to digital or internet startups in their early stages of development (Ghezzi, 2018; De Cock et al., 2018) and points at an additional phase of the business model innovation process for firms willing to internationalize that extant literature on BMs and internationalization alike disregarded, i.e. business model experimentation and validation, intended as the need to experiment on the proposed innovations in the business models to verify their viability and market potential. Concluding, it is noteworthy to emphasize that BMI *per se* is not a sufficient (nor necessary) condition

⁹ Clauss (2017), in its original and valuable attempt to provide a BMI measurement model, building on Baden-Fuller and Haefliger (2013), presents the BM as the merge of three mechanisms: value creation, value proposition and value capture.

for a successful internationalization unless it creates the foundations for some kind of a sustainable competitive advantage - as in the Bio&Agro case was the introduction of an innovative product that could have been also (or better) exploited outside the home country. Besides, other factors may play a role. For instance, this study shows that embracing BMI with an experimental approach and the presence of a strong leadership in the decision-making process were key drivers to scale the internationalization process.

5.5. Implications for Practice

The current research has several implications for practice. Our findings show how managers and entrepreneurs of firms may effectively innovate their business model, thus driving internationalization process. Indeed, Bio&Agro may be of inspiration, specifically, for firms that often have to deal with depressed and shrinking domestic markets (such as the developing-country); for instance, by suggesting a scientific approach to internationalization made of testing, experimenting and focus (“doing one thing, but properly”) as a main strategy. In addition, the study highlights how developing country difficulties may result as real “gym” for companies (Mathews 2002; Cuervo-Cazurra and Genc, 2008), thus, fostering innovation capabilities and preparing to international competition. Indeed, a market very sensitive to price (likewise the Colombian) pushed Bio&Agro to create innovative product “not only good for health but also for wallet” which represented a strength point when internationalizing. This point may result of interest for both entrepreneurs and policy-makers to invest in innovation and knowledge creation.

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References

Abdelkafi, N., Makhotin, S. & Posselt, T. 2013, "Business model innovations for electric mobility—what can be learned from existing business model patterns?", *International Journal of Innovation Management*, pp. 1340003.

Abrahamsson, J., Boter, H. & Vanyushyn, V. 2016, "Business model innovation of international new ventures: An empirical study in a Swedish context", *Journal of International Entrepreneurship*, vol. 17, no. 1, pp. 75-102

Achtenhagen, L., Melin, L. & Naldi, L. 2013, "Dynamics of business models—strategizing, critical capabilities and activities for sustained value creation", *Long range planning*, vol. 46, no. 6, pp. 427-442.

Aspara, J., Hietanen, J. & Tikkanen, H. 2010, "Business model innovation vs replication: financial performance implications of strategic emphases", *Journal of Strategic Marketing*, vol. 18, no. 1, pp. 39-56.

Autio, E., Nambisan, S., Thomas, L. D., & Wright, M. 2018, "Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems", *Strategic Entrepreneurship Journal*, vol. 12, no. 1, pp. 72-95.

Baden-Fuller, C., & Haefliger, S. 2013, "Business models and technological innovation", *Long range planning*, vol. 46, no. 6, pp. 419-426.

Balocco, R., Cavallo, A., Ghezzi, A., & Berbegal-Mirabent, J. 2019, "Lean business models change process in digital entrepreneurship", *Business Process Management Journal*, <https://doi.org/10.1108/BPMJ-07-2018-0194>.

Bennett, A., & Elman, C. 2006, "Complex causal relations and case study methods: The example of path dependence", *Political analysis*, Vol. 14, no. 3, pp. 250-267.

Blank, S. 2013, "Why the lean start-up changes everything", *Harvard business review*, vol. 91, no. 5, pp. 63-72.

Blank, S. & Dorf, B. 2012, *The startup owner's manual: The step-by-step guide for building a great company*, BookBaby.

Brislin, R.W. 1970, "Back-translation for cross-cultural research", *Journal of cross-cultural psychology*, vol. 1, no. 3, pp. 185-216.

Casadesus-Masanell, R. & Ricart, J.E. 2010, "Competitiveness: business model reconfiguration for innovation and internationalization", *Management Research: Journal of the Iberoamerican Academy of Management*, vol. 8, no. 2, pp. 123-149.

Casadesus-Masanell, R. & Tarzijan, J. 2012, "When one business model isn't enough", *Harvard Business Review* 90, nos. 1-2 (January–February 2012).

Cavallo, A., Ghezzi, A., & Balocco, R. 2018, "Entrepreneurial ecosystem research: present debates and future directions", *International Entrepreneurship and Management Journal*, <https://doi.org/10.1007/s11365-018-0526-3>

Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., ... & Zhang, Y. 2017, "SME international business models: The role of context and experience", *Journal of World Business*, vol. 52, no. 5, pp. 664-679.

Clauss, T. 2017, "Measuring business model innovation: conceptualization, scale development, and proof of performance", *R&D Management*, vol. 47, no. 3, pp. 385-403.

Corbin, J.M. & Strauss, A. 1990, "Grounded theory research: Procedures canons, and evaluative criteria", *Qualitative sociology*, vol. 13, no. 1, pp. 3-21.

Cortimiglia, M.N., Ghezzi, A. & Frank, A.G. 2016, "Business model innovation and strategy making nexus: evidence from a cross-industry mixed-methods study", *R&D Management*, vol. 46, no. 3, pp. 414-432.

Cuervo-Cazurra, A., & Genc, M. 2008, "Transforming disadvantages into advantages: developing-country MNEs in the least developed countries", *Journal of International Business Studies*, vol 39, no. 6, pp. 957-979.

- De Cock, R., Bruneel, J., & Bobelyn, A. 2018, "Making the Lean Start-Up Method Work: The Role of Prior Market Knowledge", *Journal of Small Business Management*, <https://doi.org/10.1111/jsbm.12506>.
- Doz, Y.L. & Kosonen, M. 2010, "Embedding strategic agility: A leadership agenda for accelerating business model renewal", *Long range planning*, pp. 370-382.
- Dunford, R., Palmer, I. & Benveniste, J. 2010, "Business model replication for early and rapid internationalisation: The ING direct experience", *Long range planning*, pp. 655-674.
- Eisenhardt, K.M. 1989, "Building theories from case study research", *Academy of management review*, vol. 14, no. 4, pp. 532-550.
- Eisenmann, T.R., Ries, E. & Dillard, S. 2012, *Hypothesis-driven entrepreneurship: The lean startup*.
- FAO (2012). Statistical Yearbook of the Food and Agriculture Organization of the United Nations. Available at: http://www.fao.org/economic/ess/ess-publications/ess-yearbook/it/#.W_wcdtNjAdU. (accessed, September 2018).
- FAO (2018). World Food and Agriculture - Statistical Pocketbook. Available at: http://www.fao.org/economic/ess/ess-publications/ess-yearbook/it/#.W_wcdtNjAdU. (accessed, September 2018).
- Foss, N.J. & Saebi, T. 2017, "Fifteen years of research on business model innovation: How far have we come, and where should we go?", *Journal of Management*, vol. 43, no. 1, pp. 200-227.
- Gartner, W.B. & Birley, S. 2002, "Introduction to the special issue on qualitative methods in entrepreneurship research", *Journal of Business Venturing*, vol 17, no. 5, pp. 387-395
- Ghezzi, A. 2018, "Digital startups and the adoption and implementation of Lean Startup Approaches: Effectuation, Bricolage and Opportunity Creation in practice". *Technological Forecasting and Social Change*, <https://doi.org/10.1016/j.techfore.2018.09.017>
- Ghezzi, A. & Cavallo, A. 2018, "Agile business model innovation in digital entrepreneurship: Lean Startup approaches", *Journal of Business Research*, <https://doi.org/10.1016/j.jbusres.2018.06.013>
- Gibbert, M., Ruigrok, W. & Wicki, B. 2000, "What passes as a rigorous case study?", *Strategic Management Journal*, vol. 29; 39, no. 13; 3, pp. 1465-1474.
- Gioia, D.A., Corley, K.G. & Hamilton, A.L. 2013, "Seeking qualitative rigor in inductive research: Notes on the Gioia methodology", *Organizational Research Methods*, vol. 16, no. 1, pp. 15-31.
- Gioia, D.A., Price, K.N., Hamilton, A.L. & Thomas, J.B. 2010, "Forging an identity: An insider-outsider study of processes involved in the formation of organizational identity", *Administrative Science Quarterly*, vol. 55, no. 1, pp. 1-46.
- Glaser, B., & Strauss, A. 1967, "Grounded theory: The discovery of grounded theory". *Sociology the Journal of the British Sociological Association*, vol 12, pp. 27-49.
- Hacklin, F., Björkdahl, J. & Wallin, M.W. 2018, "Strategies for business model innovation: How firms reel in migrating value", *Long range planning*, vol. 51, no. 1, pp. 82-110.
- Hall, P. A. 2003. "Aligning ontology and methodology in comparative research". *Comparative historical analysis in the social sciences*, 374.
- Hennart, J.F. 2014, "The accidental internationalists: a theory of born globals", *Entrepreneurship Theory and Practice*, vol. 38, no. 1, pp. 117-135.
- Johansson, M. & Abrahamsson, J.T. 2014, "Competing with the use of business model innovation-an exploratory case study of the journey of born global firms", *Journal of Business Models*, vol. 2, no. 1.
- Massa, L. & Tucci, C.L. 2013, "Business model innovation", *The Oxford handbook of innovation management*, vol. 20, no. 18, pp. 420-441.

- Massa, L., Tucci, C.L. & Afuah, A. 2017, "A critical assessment of business model research", *Academy of Management Annals*, vol. 11, no. 1, pp. 73-104.
- Mathews, J.A. 2002, *Dragon multinational: A new model for global growth*, Oxford University Press.
- Maxwell, J. A. 2004. Using qualitative methods for causal explanation. *Field methods*, vol 16, no. 3, pp. 243-264.
- McDougall, P.P. & Oviatt, B.M. 1996, "New venture internationalization, strategic change, and performance: A follow-up study", *Journal of business venturing*, vol. 11, no. 1, pp. 23-40.
- Miles, M.B., Huberman, A.M. & Saldana, J. 2013, *Qualitative data analysis*, Sage.
- Mitchell, D. & Coles, C. 2003, "The ultimate competitive advantage of continuing business model innovation", *Journal of Business Strategy*, vol. 24, no. 5, pp. 15-21.
- Onetti, A., Zucchella, A., Jones, M. V., & McDougall-Covin, P. P. 2012. "Internationalization, innovation and entrepreneurship: business models for new technology-based firms". *Journal of Management & Governance*, 16(3), 337-368.
- Rask, M. 2014, "Internationalization through business model innovation: In search of relevant design dimensions and elements", *Journal of International Entrepreneurship*, vol. 12, no. 2, pp. 146-161.
- Rialp, A., Rialp, J. & Knight, G.A. 2005, "The phenomenon of early internationalizing firms: what do we know after a decade (1993–2003) of scientific inquiry?", *International business review*, vol. 14, no. 2, pp. 147-166.
- Ricart, J.E., Enright, M.J., Ghemawat, P., Hart, S.L. & Khanna, T. 2004, "New frontiers in international strategy", *Journal of International Business Studies*, vol. 35, no. 3, pp. 175-200.
- Ries, E. 2011, *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*, Crown Books.
- Ritter, T. & Lettl, C. 2018, "The wider implications of business-model research", *Long range planning*, vol. 51, no. 1, pp. 1-8.
- Saebi, T., Lien, L. & Foss, N.J. 2017, "What drives business model adaptation? The impact of opportunities, threats and strategic orientation", *Long range planning*, vol. 50, no. 5, pp. 567-581.
- Sainio, L. M., Saarenketo, S., Nummela, N., & Eriksson, T. (2011). Value creation of an internationalizing entrepreneurial firm: The business model perspective. *Journal of Small Business and Enterprise Development*, 18(3), 556-570.
- Schumpeter, J. 1942, "Creative destruction", *Capitalism, socialism and democracy*, vol. 825, pp. 82-85.
- Sosna, M., Trevinyo-Rodríguez, R.N. & Velamuri, S.R. 2010, "Business model innovation through trial-and-error learning: The Naturhouse case", *Long range planning*, pp. 383-407.
- Spieth, P., Schneckenberg, D. & Ricart, J.E. 2014, "Business model innovation—state of the art and future challenges for the field", *R&D Management*, vol. 44, no. 3, pp. 237-247.
- Startup Genome (2018). Global Startup Ecosystem Report 2018 - Startup Genome. Available at <https://startupgenome.com/report2018/>. (accessed, September 2018)
- Sterman, J. D. 2000, "Business dynamics: systems thinking and modeling for a complex world", *McGraw Hill Higher Education*, Boston.
- Teece, D.J. 2018, "Business models and dynamic capabilities", *Long range planning*, vol. 51, no. 1, pp. 40-49.
- Teece, D.J. 2010, "Business models, business strategy and innovation", *Long range planning*, , pp. 172-194.

- Teece, D.J. 2007, "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, vol. 28, no. 13, pp. 1319-1350.
- Teece, D.J., Pisano, G. & Shuen, A. 1997, "Dynamic capabilities and strategic management", *Strategic Management Journal*, vol. 18, no. 7, pp. 509-533.
- UNCTAD (2018). World Investment Report 2018. Available at: <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2130>. (accessed June 2018).
- Winter, S.G. & Szulanski, G. 2001, "Replication as strategy", *Organization science*, vol. 12, no. 6, pp. 730-743.
- World Water Development (WWDR) Report (2015). Available at <http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/2015-water-for-a-sustainable-world/>. (accessed, September 2018).
- Yang, X., Sun, S.L. & Zhao, X. 2018, "Search and execution: examining the entrepreneurial cognitions behind the lean startup model", *Small Business Economics*, vol 52, no. 3, pp. 667-679
- Yin, R.K. 2013, "Validity and generalization in future case study evaluations", *Evaluation*, vol. 19, no. 3, pp. 321-332.
- Yin, R.K. 2009, "Case Study Research: Design and Methods", *Essential guide to qualitative methods in organizational research. Applied Social Research Methods Series*, vol. 219.
- Zarei, B., Nasser, H. & Tajeddin, M. 2011, "Best practice network business model for internationalization of small and medium enterprises", *Journal of International Entrepreneurship*, vol. 9, no. 4, pp. 299-315.
- Zott, C. & Amit, R. 2008, "The fit between product market strategy and business model: implications for firm performance", *Strategic Management Journal*, vol. 29, no. 1, pp. 1-26.
- Zott, C., Amit, R. & Massa, L. 2011, "The business model: recent developments and future research", *Journal of management*, vol. 37, no. 4, pp. 1019-1042.