

TITLE

MNEs' Pursuit of Multiple Market Opportunities under Uncertainty

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TITLE**MNEs' Pursuit of Multiple Market Opportunities under Uncertainty****ABSTRACT**

Recently, there has been a lot of concern of academic discussions about MNEs' internationalization in the context of opportunity. However, there is still limited literature, focusing on how MNEs identify new market opportunities in the world. To contribute to the theory building of the issue, this paper studies MNEs' identification of new market opportunity with FSAs by utilization of platforms. Through an in-depth case study of a Finnish dairy company which has commercialized technology-based products across borders, this paper shows some findings. Firstly, this paper reveals that an opportunity identification was initiated not only by the resource owner but also by foreign entities that became interested in the resource, through information sharing on platforms. Secondly, this paper also reveals a difference between internal and external platforms in the context of opportunity identification. Thirdly, this paper reveals that the platform-based opportunity identification is recognized as an evolutionary sensemaking. A resource owner and foreign entities continuously sense an opportunity by information sharing on platforms, as multiple contexts surrounding the opportunity are changed over time. I hope that this paper could contribute to further theory building about opportunity-based approach of MNEs' internationalization study.

KEY WORDS

Internationalization, Opportunity Identification, Global Ecosystem, Single Case Study, Process Study

INTRODUCTION

In this global economy, many companies are involved in global competition and try to develop their competitive advantage across borders, by overcoming the liability of foreignness (Hymer, 1960). However, it is difficult for multinational enterprises (MNEs) to identify suitable foreign markets where their firm specific advantages (FSAs) would well work, because of market uncertainty (Zaheer, 1995). In addition, it is also difficult for MNEs to build up consensus for the opportunities under uncertainty, even if they could identify suitable locations (Mahnke et al., 2007). The pursuit of opportunity has been discussed as a central theme in the research field of entrepreneurship and innovation. On the basis of traditional theories (e.g., Schumpeter, 1934; Kirzner, 1979), scholars have discussed the topic by empirical study with different contexts (Shane and Venkataraman, 2000), as well as with philosophical perspective (e.g., Alvarez & Barney, 2010). While the pursuit of opportunity has been discussed by international business (IB) scholars in the context of international new ventures, it has not been well discussed in the context of established MNEs. According to Reuber et al. (2018), both entrepreneurship and IB research fields have commonly discussed a pursuit of opportunities in different contexts. While entrepreneurship scholars have studied an entrepreneurial opportunity with new means-end frameworks (Schumpeter, 1934), international business scholars have focused on a market opportunity (Ellis, 2011). Recently, some scholars (e.g., Keupp & Gassmann, 2009; Liesche et al., 2011; Teece, 2014; Reuber et al., 2018; Verbeke & Ciravegna, 2018) suggested that IB scholars should focus on MNEs' pursuit of market opportunities, for a further bridge between entrepreneurship and IB research fields. According to Reuber et al. (2018), the MNEs' pursuit of opportunity needs to be discussed with global ecosystem approach. Traditionally, IB scholars have discussed MNEs' internationalization as an approach of global factory. In this approach, an opportunity seeker of interest in international business tends to be a resource owner, who intends to

commercialize its resource in foreign markets. In contrast, global ecosystem is an alternative approach of international business, in which a platform is regarded as the hub of multiple firms in the world. Following the suggestion, this paper aims at studying how an MNE pursues new market opportunities with utilizing its FSA across borders on platforms.

For the research purpose, this paper utilizes a single case study of a Finnish dairy company Valio Limited, which is a technology-oriented company. This company has developed multiple technologies as FSAs and has commercialized the technologies or technology-based products over 60 countries, by either wholly-owned subsidiary or licensing. After describing the background of this case company, this paper studies a process in the pursuit of new market opportunities with utilization of technologies. By discussion with existing literature of international business, as well as entrepreneurship and innovation, this paper shows how an MNE identifies market opportunities with its FSA, by utilization of platforms. Especially, it is proposed that an opportunity identification was initiated not only by the resource owner but also by foreign entities that became interested in the resource, through information sharing on internal and external platforms. In addition, it is also proposed that the platform-based opportunity identification is recognized as an evolutionary sensemaking over time.

LITERATURE REVIEW

MNEs' Internationalization

A core research theme in the IB research field is MNEs' internationalization. Welch and Luostarinen (1988, p. 36) defined this as “the process of increasing involvement in international operations”. Beamish (1990, p. 77) also identified internationalization as “the process by which firms both increase their awareness of the direct and indirect influence of international transactions on their future, and establish and conduct transactions with other

countries”. Traditionally, MNEs’ internationalization has been discussed primarily as decision making about entry modes and locations. Some scholars (e.g., Anderson & Gatignon, 1986) have suggested categorizations of entry modes, each of which have specific characteristics, and analyzed the differences and decision making.

One of the basic views about the decision making of MNEs’ internationalization is transaction cost-based internalization theory, which was developed in the 1970s and 1980s, with strong input from scholars of the Reading school (e.g., Buckley & Casson, 1976; Rugman, 1981). They focused on organizational market failure, which is caused by human behavior, especially by bounded rationality and opportunism. Because of the human behavior, economic agents cannot trust others, and thus need to specify, monitor, and enforce contracts (Williamson, 1975). On the basis of the transaction cost theory, they suggested that MNEs aim at obtaining benefits from reducing transaction costs by internalizing their foreign markets for intermediate products, such as technology, production knowhow, and brands. The internalization theory became a basic concept of IB research, and it was discussed further with different contexts, e.g., Dunning’s (1980) eclectic paradigm.

Another research tradition about MNEs’ internationalization has focused on internationalization process. Johanson and Vahlne (1977) suggested Uppsala model, in which MNEs’ internationalization is identified as a process of incremental adjustments to changing conditions of both the firm and its environment. According to them, a lack of knowledge about foreign markets is a major obstacle to international operations, but such knowledge can be acquired through experiences (Johanson & Vahlne, 1990). The discussion of knowledge and learning leads to a consideration of business networks. Scholars (e.g., Johanson & Mattson, 1988) have discussed the importance of business networks for accelerating the firm’s knowledge acquisition and learning in foreign locations. Johanson and Vahlne (2009) also revised their original Uppsala model to include business networks.

MNEs' Pursuit of Market Opportunities

Recently, IB scholars suggested an alternative research approach for MNEs' internationalization, with respect to pursuit of market opportunities. Opportunity has been one of the central themes in the entrepreneurship research field. Following Schumpeter (1934)'s discussion about innovation, scholars identified an entrepreneurial opportunity as a situation in which a person can discover or create a new means-ends framework which is based on new resource combinations (e.g., Casson, 1982; Shane & Venkataraman, 2000). Because the entrepreneurial opportunity with the new means-end frameworks involves uncertainty, it is differently perceived and evaluated by different actors. Scholars of entrepreneurship, as well as innovation, studied how firms overcome such an uncertainty for innovation.

On the other hand, IB scholars have discussed market opportunity, regarding to geographic market (Reuber et al., 2018). Ellis (2011, p. 100) defined opportunity as "the potential to exchange valued goods and services among partners located in different markets". According to Ellis (2011), an opportunity for MNEs' international business indicates an exchange, because the basis of value creation in this context is exchange in which sellers and buyers are separated by geographic, cultural and other forms of distance. The new market opportunity also involves situational uncertainty, and IB scholars have traditionally treated it as a constraining factor of internationalization. Such a situational uncertainty became a basis of internalization theory, as well as internationalization process model.

As reviewed above, both entrepreneurship and IB research field have dealt with a pursuit of opportunities in different contexts. However, traditional IB theory did not well discuss the MNEs' pursuit of opportunities. As reviewed, internalization theory took uncertainty into account in the context of new market entry. However, it did not fully consider MNEs' search of new market opportunity, because it implicitly assumed preexisting markets which fail

under certain conditions (Teece, 2014). Internationalization process theory (e.g., Johanson & Vahlne, 1977) did incorporate the context of opportunity. However, it did not provide explanation as to why or how an opportunity is identified and discussed (Chandra et al., 2009). Reuber et al. (2018, p. 400) suggested that both research fields could be merged further, with respect to the pursuit of opportunities, noting that “we explore a new notion of how opportunities are pursued, based on distributed agency, which we believe has the potential to bring together what are, for the most part, the ‘two solitudes’ of the entrepreneurship and international business perspectives on opportunity”.

MNEs’ Identification of Market Opportunities

In the MNEs’ pursuit of market opportunities, one of the critical themes would be how to identify an opportunity. While entrepreneurship scholars were primarily interested in pursuit of one opportunity in a certain country, IB scholars were interested in pursuit of multiple opportunities that are located in different countries. Such a multiplicity of market opportunities is an important characteristic of MNEs’ internationalization (Reuber et al., 2018).

Another characteristic is market uncertainty. Internalization theory (e.g., Buckley & Casson, 1976; Dunning, 1980; Rugman, 1981; Rugman & Verbeke, 1992) argued that MNEs could overcome their liability of foreignness by utilization of firm specific advantages (FSAs). When an MNE develops a competence as an FSA, the competence has a potential to be competitive in each of all countries in the world. It is suggested that MNEs should pursue market opportunities that the FSAs work well at overseas (Rugman & Verbeke, 1992).

However, managers in MNEs cannot exactly select suitable locations in the world, because of market uncertainty. For example, a lot of firms develop their own technologies mainly for local responsiveness in the domestic market, especially if customers’ needs are very different

in each location (Bartlett & Ghoshal, 1989). In this case, it might happen that such a locally developed technology unintentionally matches existing unmet needs in some foreign countries. In these countries, the technology might be used for local objectives that the firms' managers cannot even imagine. As Mathews and Zander (2007, p. 393) suggest, "the aggregate of locally contained and 'sticky' resources and knowledge offers a global opportunity set that can be of unique value to those who can identify and act upon it (Malmberg & Maskell, 1999; Pavitt, 1988; Porter, 1990)". Following the suggestion, it is a critical challenge for MNEs to identify new market opportunities with their existing FSAs. At the same time, even if a manager could identify a new market opportunity with FSAs, it would be difficult for her/him to build up consensus about the opportunity under uncertainty (Mahnke et al., 2007). This is similar to co-creation of entrepreneurship (Venkataraman et al., 2012), as well as "valley of death" (Markham et al., 2010), which was discussed by entrepreneurship and innovation scholars.

Some scholars already started the discussion about MNEs' identification of new market opportunities. For example, Crick and Spence (2005) investigated MNEs' opportunity identification of internationalization, suggesting the influence of serendipitous events. Chandra et al. (2009) conducted case studies in eight Australian firms, and noted that firms with little or no prior international knowledge tend to make use of opportunity discovery, rather than a deliberate or systematic approach. The opportunity identification was also discussed in the context of individual cognitions. For example, Maitland and Sammartino (2015) investigated the individual mental models and heuristics used to assess an opportunity. Chandra (2017) also analyzed the individual decision rules used to evaluate international opportunities, suggesting that the rules would become complex through individual experience of internationalization.

Reuber et al. (2018) suggested that such an identification of opportunities would be

conducted by a global ecosystem approach. According to them, IB scholars have traditionally discussed MNEs' internationalization as an approach of global factory. In this approach, an opportunity seeker of interest in international business tends to be a resource owner, who wants to commercialize its resource in foreign markets. The resource owner analyzes foreign markets, finds out potential foreign markets/partners, and gets access to them. In contrast, global ecosystem is an alternative approach of internationalization, in which a platform is regarded as the hub of multiple firms in the world. Following Adner (2017)'s view, Reuber et al. (2018) regarded ecosystem as "a set of multiple actors that interact to produce a focal value proposition" (p. 400). A concept of platform has been identified in different contexts (Cusumano, 2010), as it got attention of a broad range of academic scholars as well as practitioners (Thomas et al., 2014). It is defined as "products and services that bring together groups of users in two-sided networks" (Eisenmann et al., 2006, p. 94). According to Eisenmann et al. (2006), platform provides infrastructure and rules facilitating transactions in a two-sided market. It includes not only internet-based digital platform but also any other platforms that bring together groups of users in two-sided networks.

In the global ecosystem approach, the opportunity seeker could be not only a resource owner but also a foreign player which might commercialize the resource in a foreign market. A resource owner shares information about its resource with multiple foreign players on platforms and waits for contacts from foreign players that become interested in the resource. As described by Reuber et al. (2018), this global ecosystem approach for internationalization has been also discussed by some scholars. For example, Gereffi (1999) highlighted the importance of buyer-driven ecosystems. Buckley and Prashantham (2016) also studied the division of entrepreneurial labor between MNEs and small and medium-sized enterprises (SMEs) in inter-firm networks. The difference between global factory and global ecosystem approaches is similar to a distinction between pipeline and platform business. According to

Van Alstyne et al. (2016), pipeline business is the classic value chain model with which value is created by controlling a linear series of activities, while platform business is the growing business model with which value is created by interaction between producers and consumers on a platform.

As already described, such an MNE's identification of market opportunities was not well discussed in the IB research field. Following the research gap, as well as recent suggestions, this paper focuses on MNEs' pursuit of opportunities with utilizing their FSAs. As suggested by Reuber et al. (2018), this would contribute to a further bridge between entrepreneurship and IB research field. Specifically, this paper focuses on MNEs' identification of new market opportunity on platforms. Here, the research question is *how does an MNE identify market opportunities of utilizing its FSA across borders, on platforms?*

According to Reuber et al. (2018), a firm-level research on the pursuit of market opportunities is process-oriented. For example, Mathews and Zander (2007, p. 392) suggested that MNEs' internationalization should be viewed as a dynamic process of "discovering new business opportunities and exploiting them through internationalization and engagement in competition". Keupp and Gassmann (2009) also suggested that future research could model the process as a sequence of activities that begins with the firm identifying opportunities. Following these suggestions, this paper focuses on a process in which an MNE pursues market opportunities across borders with utilizing its FSAs.

RESEARCH METHODOLOGY

The research purpose and research question of this paper is pursued by an empirical study. It is designed on the basis of a single case study methodology, as well as a process study methodology.

Single Case Study

Firstly, this paper utilizes a single case study methodology. MNEs' pursuit of market opportunities is a complicated activity involving multiple functions that are conducted by multiple internal/external players in multiple countries. This activity is influenced by internal factors such as an organizational strategy and an organizational structure, as well as external factors, such as market situation and political regulation. A single case study methodology is the suitable methodology for an analysis of a complicated and context-dependent activity (Eisenhardt, 1989). This paper specifically focuses on the dairy product industry, which has high levels of technology, especially healthcare technology. Many dairy product manufacturers develop technologies by their own R&D, produce the technology-based products called functional foods, and pursue new business opportunities with these across borders. This makes the dairy product industry particularly suitable for this study.

This paper focuses on one MNE in the dairy product industry, on the basis of the following theoretical criteria. Firstly, the case company is required to develop technologies as FSAs. Secondly, the case company is required to be an MNE which operates in multiple countries. Thirdly, the company is required to compete globally, mainly based on the headquarters' technologies. On the basis of these criteria, several dairy product manufacturers were identified as potential companies. Through negotiation with them, Valio Limited agreed to take part in this empirical study. Valio is a leading Finnish dairy manufacturer which produces dairy products. There were 4375 employees at the end of 2014. The net sales in 2014 stood at 1950 million euro. Valio is a cooperative organization, and it is owned by 17 cooperatives, each of which is organized by multiple dairy farmers in Finland. Furthermore, Valio is a technology-oriented company, and the technological tradition was developed by Dr. Virtanen, a former laboratory director of Valio, who received the Nobel Prize for Chemistry for his invention of the AIV Silage Method. On the basis of this research tradition, Valio strengthened the development of functional food which contains technologically developed

ingredients with a specific health benefit. These technologies supported Valio's internationalization, as heterogeneous resources in home and foreign countries, and Valio currently operates the business in over 60 countries.

Valio's Internationalization Path of Three Technologies

Since the 1990s, Valio has commercialized several technologies across borders. Especially, it has strengthened the following three technologies: LGG®, lactose-free, and Evolus®. The first technology is the LGG® technology which is a kind of probiotic technology in Valio. Probiotic is bacteria associated with beneficial effects, and dairy product manufacturers provide dairy products including the bacteria. The LGG® technology was initially commercialized in Finland in 1990 and later commercialized in many foreign countries. The second technology is the lactose-free technology, which is a process technology to remove lactose from milk. Even though people who have lactose intolerance cannot usually consume dairy products, they can drink soy milk drink or the lactose-free dairy products. Valio developed the technology for the first time in the world, and it initially commercialized the technology-based products in Finland in 2001 and commercialized these products in foreign countries too. The third technology is the Evolus® technology, which supports lowering blood pressure. This technology was commercialized in Finland and licensed in some countries. However, Valio stopped all sales of the products at the end of the 2000s, because the products had not sold well.

Valio's three technologies have been commercialized across borders. Their international technology commercialization is depicted as internationalization path in Figure 1. It is clearly shown that their internationalization paths were different. In other words, each technology was commercialized by an idiosyncratic internationalization path. In the case of LGG® technology, the internationalization path started at the licensing business in 14 foreign

countries, including the Netherlands, Norway, Ecuador, Japan, and Israel in 1990s. Later, the technology was commercialized at a subsidiary business in strategic foreign countries in the 2000s. In the case of lactose-free technology, the internationalization path started from the commercialization in Sweden at a subsidiary business in 2001. It was later followed by the Baltic subsidiary in 2007 and the Russian subsidiary in 2008. At the same time, the technology was gradually commercialized by the licensing business in five foreign countries, specifically Switzerland, Belgium, South Korea, Spain, and Norway in the 2000s. In the case of Evolus® technology, the internationalization path started by the licensing business in several foreign countries, including Switzerland, Portugal, South Korea, and Italy. However, it was not commercialized in any strategic foreign countries, and the whole commercialization was terminated at the end of the 2000s.

‘Insert Figure 2 here’

Data Collection and Analysis

In the empirical study, data was collected through semi-structured interviews, as well as secondary documents. Semi-structured interviews were conducted in order to gather data about the background and process in pursuit of market opportunities with new technologies. There were two types of interviewee. The first type of interviewee was Valio’s senior/middle manager who is involved in the technology development and commercialization. I gathered data through 20 interviews in the headquarters’ R&D unit, product unit, and sales unit, as well as in three foreign subsidiaries (in Sweden, Russia, and Estonia). The second type of interviewee was a senior/middle manager in global dairy manufacturers that are foreign licensees of Valio’s technologies. I gathered data through an interview with each of six companies. Details of the interviews are described in Table 1. All interviews were recorded electronically, as well as notes being made. Then, all interviews were transcribed as texts. In

addition, secondary data was collected in order to supplement interview data. The secondary data includes Valio's corporate magazine, corporate website, annual reports (from 1994), and other internal documents, such as a list of licensees. In addition, it includes an industrial magazine, academic articles about dairy product business, and functional food technology.

'Insert Table 1 here'

Because this study focuses on a process in pursuit of market opportunities across borders, it utilizes the methodology of process study, which is 'understanding how things evolve over time and why they evolve in this way' (Langley, 1999, p. 692). The data was analyzed through four steps. In the first step, I aimed to review all the available information about the technology commercialization across borders in Valio and also to dig out influential concepts that were hidden in a flood of information. I carefully analyzed all texts, through a line-by-line examination, to identify, label, and develop codes from the data (Strauss & Corbin, 1990; Miles & Huberman, 1994), with utilizing NVIVO 11 software. An important code of process study is 'event', which means 'what key actors do or what happens to them' (Van de Ven, 2007, p. 155), because a process is analyzed as a sequence of events. At the same time, process study deals with not only events but also contexts surrounding the events (Pentland, 1999). By following Pentland's (1999) model of process analysis, I extracted codes of 'event', as well as five types of codes that are attached in each event: 'time', 'actor', 'voice', 'reference', and 'other'.

In the second step, I analyzed the process of technology commercialization by both foreign subsidiary and licensing. Using the codes of 'event', 'actor' and 'time', I chronologically wrote down the whole process. According to Eisenhardt (1989), within-case analysis typically involves detailed case study write-ups that are often simply pure descriptions but are central to the generation of insight (Gersick, 1988; Pettigrew, 1990). In addition, I chronologically mapped the events of each process in a figure. These are shown

later in Table 2. Next, I compared the write-ups and the maps among these different approaches. In the third step, I analyzed detail contexts of opportunity identification. I analyzed the codes of ‘voice’, ‘reference’ and ‘others’, and then I extracted specific first and second-order concepts that were aggregated into overarching concepts (Gioia, 2013). These are shown later in Table 3. In the fourth step, I discussed the findings about the process and detail contexts, by referring to the literature on internationalization, as well as entrepreneurship and innovation. According to Eisenhardt (1989), an essential feature of theory building is a comparison of the emergent concepts, theory, or hypotheses with the extant literature.

PROCESS STUDY OF VALIO’S TECHNOLOGY COMMERCIALIZATION

In this section, Valio’s pursuit of market opportunity with technologies is described and analyzed. Valio pursues the opportunities in foreign countries mainly via two types of business: subsidiary business and licensing business. Each of these is conducted by different players. In addition, each approach targets different kinds of market opportunities. From interview transcripts, I extracted events in each approach and chronologically mapped the events as a process. The process, as well as representative quotations about each event, is shown in Table 2. In addition, these approaches are also briefly described in the following.

‘Insert Table 2 here’

Process of Technology Commercialization by Subsidiary Business

Headquarters’ product unit managers, who are responsible for each product category, think of business opportunities in Sweden, Russia and Baltic countries where Valio has already established foreign subsidiaries. They share information about new technologies and technology-based products with subsidiary managers in formal and informal meetings, by

intranet, and by internal documents. (See Event 1-1 in Table 2). When the product unit managers have a special concern about commercialization of a certain product in one of the foreign subsidiaries, they propose it to the subsidiary's managers (See Event 1-3 in Table 2).

Subsidiary managers in these foreign countries also look for new technology-based products that can be competitive in the markets. They share information about their markets with product unit managers (see Event 1-2 in Table 2). When the subsidiary managers become interested in commercialization of a certain technology-based product in their market, they conduct a market research to see potential of the product (see Event 1-4 in Table 2).

After either product unit managers or subsidiary managers take a concern about the commercialization, both of them have a meeting together. (see Event 1-5 in Table 2). Then, subsidiary managers make a decision about commercialization of such a product by strategically reviewing their product portfolio (see Event 1-6 in Table 2).

Process of Technology Commercialization by Licensing Business

Valio's technology sales team, which is responsible for licensing business in headquarters, introduces Valio's new technologies for global markets, especially for foreign dairy manufacturers. For example, the team often attends international exhibitions or conferences, making presentations about the technologies. The team also introduces the technologies on the basis of existing networks. When foreign companies visit Valio, the team introduces new technologies to the companies. The team also uses corporate website for the introduction (see Event 2-1 in Table 2). The team searches for potential companies in foreign countries by itself. It searches not only for the existing customers but also for new customers. When the team has a special interest in a certain foreign market, it gets in contact with potential companies in the market, by phone calls or emails (see Event 2-3 in Table 2).

Foreign manufacturers also look for new technologies that could be new competence in

their markets, and they gather information by attending international exhibitions, by reading industrial magazines, and by utilizing their own networks (see Event 2-2 in Table 2). When they become interested in Valio's new technologies, they get contacts with Valio's technology sales team, ask detailed questions about the technologies, and evaluate the market needs at their locations (see Event 2-4 in Table 2).

After either technology sales team or foreign manufacturers take a special concern about the commercialization, the technology sales team starts negotiation about the opportunity with foreign manufacturers. If the team thinks that this company is suitable as a licensee, the team proposes the licensing of technology (see Event 2-5 in Table 2). The negotiation takes a long time as there are a lot of problems that need to be solved in order to get common understandings. Then, the foreign company makes decision about commercialization of such a technology-based product. (see Event 2-6 in Table 2).

Discussion

As described above, Valio commercializes the headquarters' technologies or technology-based products through two kinds of approaches. Table 2 shows that both subsidiary business and licensing business are conducted by a similar type of process, even though these have different characteristics of business. The process is constructed by three phases: sensing of opportunity; identification of opportunity; and consensus building of opportunity. At the first phase, players share information about resources, as well as markets. In the case of subsidiary business, product unit managers share information about technology-based products, while subsidiary managers share information about their markets (see Event 1-1 in Table 2). In the case of licensing business, Valio's technology sales team share information about Valio's new technology, while foreign companies share information about their markets (see Event 2-1 in Table 2). At this phase, neither of them has a special interest in a certain opportunity. Rather,

both of them expect that they can find out a potential foreign market or resource for their own business. At the second phase, either of two players has a special concern for a certain market or a certain resource, and it gets contacts with the other player. At the third phase, both players negotiate details together toward consensus building about the market opportunity. Then, a foreign entity makes a decision for it.

Valio's process of technology commercialization can be discussed with some contexts. At first, a characteristic of Valio's technology commercialization is that an opportunity is identified not only by a resource owner but also by a foreign entity which become motivated to commercialize the resource in a foreign market. The process follows a concept of global ecosystem, which was suggested by Reuber et al. (2018). As described in the section of literature review, IB scholars have traditionally discussed MNEs' internationalization as an approach of global factory. In this approach, an opportunity seeker of interest in international business tends to be a resource owner, who wants to commercialize its resource in foreign markets. The resource owner analyzes foreign markets, finds out potential foreign markets/partners, and gets access to them. In Valio's case, this is shown as an initiative of Valio's product unit manager (see Event 1-3 in Table 2), as well as an initiative of Valio's technology sales team (see Event 2-3 in Table 2). In contrast, global ecosystem is an alternative approach of international business, in which a platform is regarded as the hub of multiple firms in the world. In the model, the opportunity seeker could be not only a resource owner but also a foreign entity which might commercialize the resource in its own market. A resource owner shares information about its resource with multiple foreign entities and waits for contacts from foreign entities that become interested in the resource. In Valio's case, this is shown as an initiative of Valio's foreign subsidiaries (see Event 1-4 in Table 2), as well as an initiative of foreign companies (see Event 2-4 in Table 2).

At second, Valio's case shows a difference between internal and external platforms that

are utilized in sensing of opportunities. In the case of subsidiary business, information about resources, as well as foreign markets, is shared on internal platforms, including internal meetings, internal magazines and intranet. This is because both players are managers within Valio. In the case of licensing business, information about resources, as well as foreign markets, is shared by external platform. The platform includes international exhibition, industrial magazine, and internet service. Then, it is revealed that the internal and external platforms are utilized in sensing different market opportunities. In the case of subsidiary business, an opportunity is limited to foreign markets that Valio has already developed business by its own foreign subsidiary, including Sweden, Russia and Baltic countries. In the case of licensing business, an opportunity is open to all over the world. For example, Valio has licensed its technologies in many countries located in different regions, e.g., Japan, Netherlands, Norway, Ecuador, Japan, Greenland, Papua New Guinea, and Israel, as shown in Figure 1. As suggested by Reuber et al. (2018), MNEs' pursuit of market opportunities is characterized as multiplicity of opportunity. By utilizing different types of platforms, MNEs can broadly target multiple opportunities in the world.

At third, Valio's case can be discussed with consensus building of opportunity. As already described in the section of literature review, a challenge of new opportunity development would be consensus building among multiple players, who often have different and conflicting goals, motives and political agendas (Mahnke et al., 2007). Valio's case shows that the final decision maker is a foreign entity which becomes responsible for the business development with the resource in its local market. If an opportunity identification is initiated by a foreign entity, it means that a final decision maker is already concerned of the opportunity. Accordingly, it can be assumed that an opportunity would be easily negotiated for consensus building, if the opportunity is identified by a foreign entity. This is supported by the following comment of Valio's manager:

At the same time, the truth is that in most cases, licensing is rather bought than sold. If there is no real customer interest in that region, it is very difficult. That is still very much true that it is we can try to get companies in certain markets. We can try to get them interested. But, we cannot force them to buy. So that is a big question for us all the time, how to create interest? Enough interest in the companies in those countries?

Evolutionary Sensemaking for Opportunity Identification

As analyzed in the previous section, Valio organizes technology commercialization in foreign countries, by utilizing internal and external platforms. In the process, an opportunity is identified by information sharing across borders on these platforms. At the same time, Valio's case shows that such an opportunity identification is an evolutionary activity, rather than one-time activity. In fact, most interviewees were not specially concerned of an opportunity, when they knew it on a platform for the first time. Later, they became interested in it, enough to start negotiation. It means that there were time lags between their initial sensing of an opportunity and their start of negotiation. In order to understand the opportunity identification with the evolutionary aspect, I analyzed detail contexts surrounding the opportunity identification. Then, I categorized three kinds of contexts that affect the opportunity identification, through extraction of specific first and second-order concepts that were aggregated into overarching concepts. These are shown in Table 3, and these are also explained in the followings.

‘Insert Table 3 here’

Change of Location Context

The first context, which drives an evolutionary change for opportunity identification, is location factor. This means a factor which is related to a foreign market, covering three kinds

of second-order concepts; consumers' needs, competitors' activity, and governmental policy. At first, an opportunity was identified, as consumers' needs in a foreign market was changed. For example, a manager at a foreign licensee mentioned that consumers had become interested in healthy foods more, by an acceleration of population ageing in the foreign country (see quote (1) in Table 3). Following the change of consumers' needs, the licensee decided to commercialize new products with Valio's technology.

At second, competitors' activity is also one of the location factors. For example, a manager at subsidiary in Russia mentioned that he had decided not to commercialize a technology, because he had not felt enough customers' needs in the market (see quote (2) in Table 3). According to the manager, his decision making was also influenced by competitors' activities. He decided to commercialize a technology-based product, because some competitors had started commercialization of the similar products in the local market (see quote (2) in Table 3).

Another concept related to the location is governmental policy. It is mentioned by a licensee's manager that his decision making followed the local government's establishment of certification system about foods for specified health (see quote (4) in Table 3).

Change of Organizational Context

The second context, which drives an evolutionary change for opportunity identification, is organizational factor. This means a factor which covers a second-order concept called organizational strategy. An opportunity was identified as an organizational strategy was changed. For example, a manager at Valio's subsidiary in Baltics mentioned that the subsidiary was not specially interested in the headquarters' technology of lactose free. However, later, headquarters strongly recommended the technology to subsidiary managers, because the technology became recognized as a strategically important resource of Valio.

Following the organizational strategy, the Baltic subsidiary also decided to commercialize the technology-based products in their market (see quote (5) in Table 3).

Change of Resource Context

The third context, which drives an evolutionary change for opportunity identification, is resource factor. This means a factor which is related to a resource itself or resource-based business, covering two kinds of second-order concepts; resource, and performance of resource-based business in other locations. At first, an opportunity was identified, as a resource was improved. For example, a manager at a foreign licensee mentioned that the company had already known Valio's low lactose technology. Later, in a meeting, Valio informed that Valio's R&D department could develop a lactose free milk which was not sweet. Following the improvement of technology, this company finally decided to commercialize the technology-based products (see quote (7) in Table 3). Another example was that Valio improved LGG® technology and successfully adapted it in cheese products. Following the improvement of technology, a foreign company finally became interested in an opportunity of commercializing LGG® products in the market. (see quote (8) in Table 3).

Another concept related to the resource is performance of the resource-based business in other locations. An opportunity was identified, as a resource-based product was successfully commercialized in other locations. For example, a subsidiary manager of Valio mentioned that he became interested in lactose free technology because he heard a successful commercialization of lactose free technology in Finland (see quote (9) in Table 3). A manager of a foreign licensee also mentioned that lactose free technology looked attractive, because of the success story in Finland and Sweden (see quote (10) in Table 3).

CONCLUSION

This paper builds on and contributes to a discussion about MNEs' internationalization, which lies at the heart of the issue of international business study. MNEs' internationalization is an entrepreneurial task, involving high uncertainty. Accordingly, there is a growing concern about studying it as an MNE's pursuit of market opportunities across borders with global ecosystem approach (Reuber et al., 2018). Following the suggestion, this paper studied how an MNE identifies market opportunities with its FSA, by utilization of platforms. By an empirical study through a single case of Valio Limited, this paper extracted some key findings. At first, this paper revealed that an opportunity identification is initiated not only by the resource owner but also by foreign entities that become interested in the resource, through information sharing on platforms. As already described in the section of literature review, managers in an MNE cannot exactly select suitable locations in the world, because of market uncertainty. They might not be able to identify opportunities in foreign countries, e.g., where are located psychologically and geographically far from their home country. Moreover, their analysis would be biased by bounded rationality, as well as opportunism. Even if they could imagine an opportunity in an unfamiliar market, they could not easily sense it as potential. By utilizing a platform, managers in an MNE can make other players on a platform autonomously identify market opportunity. Because managers in MNEs would get sudden contacts from foreign firms that they could not select by their strategic analysis, they would feel these as serendipitous (Crick & Spence, 2005). In other words, utilizing the platforms, an MNE intentionally create a capacity by which it can unintentionally and serendipitously identify new market opportunities.

Secondly, this paper suggests a difference between internal and external platforms, in the context of opportunity identification. When an MNE utilizes internal platforms for opportunity identification, e.g., internal meetings and documents, an identified opportunity

would be limited to foreign markets that the MNE has already developed business. On the other hand, when an MNE utilizes external platforms, e.g., international exhibitions, an identified opportunity would be open to all over the world. By utilization of internal and external platforms, MNEs can broadly target multiple opportunities in the world. Thirdly, this paper reveals that the platform-based opportunity identification is recognized as an evolutionary sensemaking. For an opportunity identification, a resource owner and foreign entities continuously sense an opportunity by information sharing on platforms, as multiple contexts are changed over time.

On the basis of the findings, this paper can be concluded with a framework, showing a process of opportunity identification by platforms. It is depicted in Figure 2. In the figure, it is proposed that an opportunity is identified either by a resource owner or by a foreign entity through information sharing on internal/external platforms. If either of them identifies an opportunity, they start negotiation together for consensus building of the opportunity. In addition, it is also proposed that such an opportunity identification is not always initiated by the first information sharing. Rather, both the resource owner and foreign entity evolutionarily sense an opportunity again and again, as multiple contexts surrounding the opportunity are changed over time. In the evolutionary sensemaking, either of them might be able to identify an opportunity at a time, if it could be finally motivated to exploit the opportunity.

‘Insert Figure 2 here’

By an empirical study and discussion, this paper provides a theoretical contribution to an academic discussion about MNEs’ internationalization. More specifically, this paper could contribute to the further bridge between entrepreneurship and international business research contexts (Reuber et al., 2018). Moreover, this paper also provides actionable insights to practitioners in MNEs. Firstly, it can be suggested that managers need to utilize carefully internal and external platforms that new market opportunities are differently sensed and

identified. Secondly, it can be also suggested that managers need to understand an aspect of evolutionary sensemaking embedded in the opportunity identification over time.

On the other hand, there are several limitations that should be recognized in this paper. The first limitation is caused by the nature of a process study. Process phenomena have a fluid character that spreads out over both space and time, and it is difficult to isolate units of analysis in an unambiguous way (Langley, 1999). The second limitation is caused by the nature of a single case study, as the generalizability of such findings and conclusions would be limited (Siggelkow, 2007). Among the peculiarities of this case that may constrain its extension to other situations are its characteristics as a cooperative company, functional food technology, and the Finnish context. It is necessary to analyze more cases, in order to cover the limitations of this paper.

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FIGURES

Figure 1: Internationalization Path of Valio's Three Technologies■ **LGG® Technology**

	1980s	1990s	2000s	2010-2015
Domestic Technology Commercialization (Domestic Business) R&D	Start of Sales Increase of Sales		
International Technology Commercialization (Subsidiary Business)		Start of Sales (Estonia)	(Russia, (Lithuania, Sweden) Latvia)	
International Technology Commercialization (Licensing Business)		Start of Licensing Start of Sales (14 Countries) Netherland, Norway, Switzerland, Ecuador, Japan, Australia, Italy, Iceland, Croatia, Bosnia-Herzegovina, Slovenia, Israel, South Korea, and Greenland	Start of Sales (12 Countries) Papua-New-Guinea, Spain, United Arab Emirates, Uruguay, Serbia, Montenegro, Chile, Macedonia, Vanuatu, Kosovo, Kazakhstan, and Albania	Start of Sales (5 Countries) Argentina, India, Hong Kong, Singapore, and China

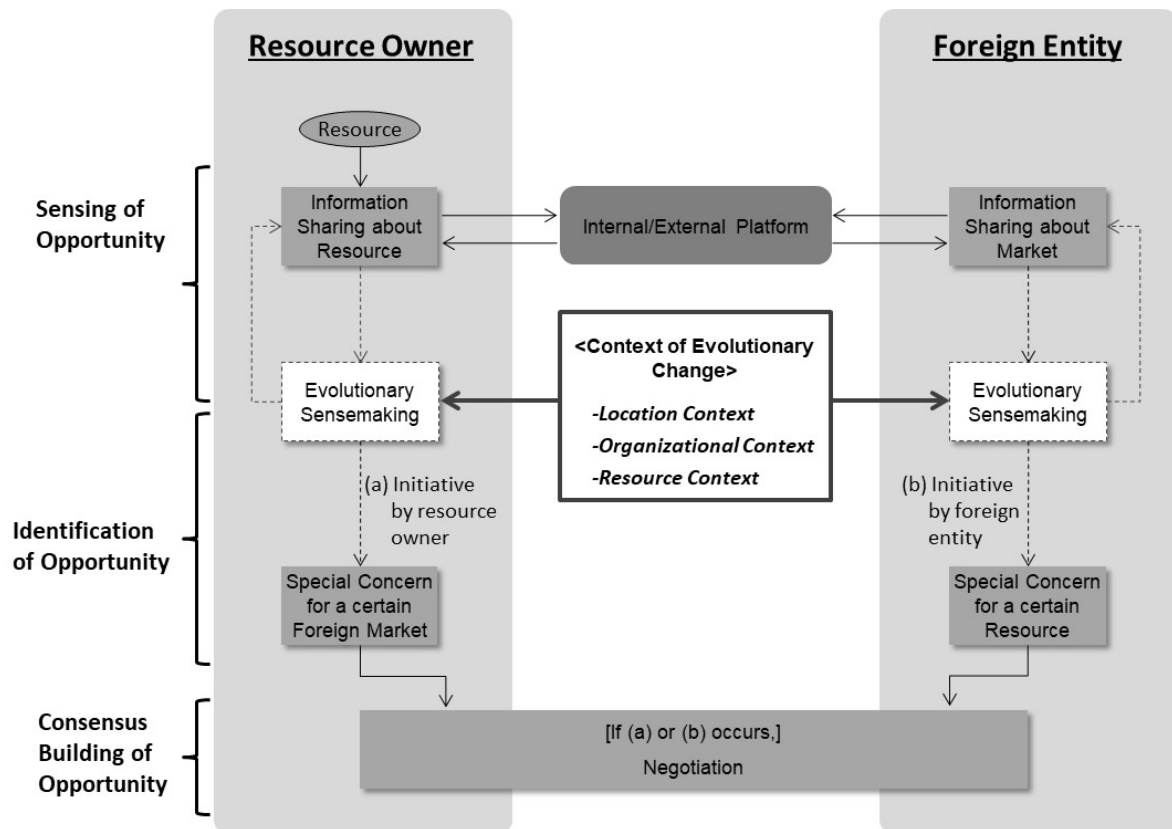
■ **Lactose-Free Technology**

	1980s	1990s	2000s	2010-2015
Domestic Technology Commercialization (Domestic Business)	R&D	Start of Sales (Increase of Sales)	
International Technology Commercialization (Subsidiary Business)			Start of Sales (Sweden) (Estonia, Latvia, Lithuania, & Russia)	(Denmark)
International Technology Commercialization (Licensing Business)			Start of Licensing Start of Sales (5 Countries) Switzerland, Belgium, South Korea, Spain, and Norway	Start of Sales (2 Countries) Netherland, and Germany

■ **Evolus® Technology**

	1980s	1990s	2000s	2010-2015
Domestic Technology Commercialization (Domestic Business)	 R&D	Start of Sales Termination of Sales	-
International Technology Commercialization (Subsidiary Business)			-	-
International Technology Commercialization (Licensing Business)			Start of Licensing Start of Sales e.g., Switzerland, Portugal, South Korea, Italy	Termination of Sales -

Figure 2: MNEs' Opportunity Identification by Utilization of Platform



TABLES

Table 1: List of Interviewees

No.	Participant ID	Section	Job Title	Class	Interview (minutes)
1	[R&D1]	R&D Department	Research Manager	Senior Manager	Face to face meeting (90)
2	[R&D2]	R&D Department	Research Manager	Senior Manager	Face to face meeting (60)
3	[R&D3]	R&D Department	Research Manager	Senior Manager	Telephone interview (60)
4	[Prodcut1]	Product Unit	Senior Product Manager	Senior Manager	Face to face meeting (80)
5	[Product2]	Product Unit	Senior Product Manager	Senior Manager	Telephone interview (30)
6	[Product3]	Product Unit	Product Manager	Middle Manager	Telephone interview (30)
7	[Product4]	Product Unit	Product Manager	Middle Manager	Telephone interview (30)
8	[Sweden1]	Subsidiary (Sweden)	Marketing Manager	Senior Manager	Telephone interview (50)
9	[Russia1]	Subsidiary (Russia)	CEO	Senior Manager	Telephone interview (40)
10	[Baltics1]	Subsidiary (Baltics)	CEO	Senior Manager	Face to face meeting (60)
11	[Baltics2]	Subsidiary (Baltics)	Marketing Manager	Middle Manager	Face to face meeting (40)
12	[Exporting1]	Exporting Sales Team	Senior Vice President	Senior Manager	Face to face meeting (30)
13	[Exporting2]	Exporting Sales Team	Senior Vice President	Senior Manager	Telephone interview (30)
14	[Exporting3]	Exporting Sales Team	Export Manager	Middle Manager	Telephone interview (30)
15	[Licensing1]	Technology Sales Team	Director	Senior Manager	Face to face meeting (90)
16	[Licensing2]	Technology Sales Team	Director	Senior Manager	Telephone interview (60)
17	[Licensing3]	Technology Sales Team	Director	Senior Manager	Telephone interview (30)
18	[Licensing4]	Technology Sales Team	Export Manager	Middle Manager	Face to face meeting (60)
19	[Licensing5]	Technology Sales Team	Export Manager	Middle Manager	Face to face meeting (50)
20	[Marketing]	Marketing Team	Brand Manager	Senior Manager	Telephone interview (30)
21	[LicenseeA]	Technology Development	-	Middle Manager	Face to face meeting (40)
22	[LicenseeB]	Technology Development	-	Senior Manager	Telephone interview (30)
23	[LicenseeC]	Technology Development	-	Middle Manager	Telephone interview (20)
24	[LicenseeD]	Technology Development	-	Senior Manager	Telephone interview (30)
25	[LicenseeE]	Technology Development	-	Middle Manager	Telephone interview (20)
26	[LicenseeF]	Technology Development	-	Middle Manager	Telephone interview (30)

Table 2: Valio's Pursuit of Opportunity with Technology across Borders

Process Model	Representative Quotes for Events
<p>■ Subsidiary Business</p> <pre> graph TD subgraph Valio direction TB TP[Technology-Based Product] --> ITP[Introduction of Technology-based Products] ITP -- "(a) Initiative by product unit" --> CFS[Concern for a certain Foreign Subsidiary] ITP <--> IS[Information Sharing] end subgraph ForeignSubsidiary direction TB IS2[Information Sharing] -- "(b) Initiative by foreign subsidiary" --> CFT[Concern for a technology-based product] CFT --> NM["(If (a) or (b) occurs.) Negotiation"] NM --> DM[Decision Making] DM --> CTP[Commercialization of Technology-based Products] end ITP <--> IS2 IS2 --> IS NM --> ITP NM --> CFT </pre> <p>The flowchart for Subsidiary Business shows the process from Valio's Product Unit to a Foreign Subsidiary. It is divided into three stages: Sensing of Opportunity, Identification of Opportunity, and Consensus Building of Opportunity. In the Sensing stage, Valio introduces technology-based products (1-1) and shares information (1-2). In the Identification stage, Valio expresses concern for a certain foreign subsidiary (1-3) and the subsidiary expresses concern for a technology-based product (1-4). In the Consensus Building stage, negotiation occurs (1-5) if either initiative occurs, leading to decision making (1-6) and commercialization of technology-based products.</p>	<p>(1-1) We also think of the market of these products in some foreign countries, Sweden, Russia, and Baltics. We always share these with our subsidiary managers. [Manager at Product Unit]</p> <p>(1-2) We are actually communicating with headquarters time to time about their product development and new products and concepts. So we can always share the idea. [Manager at Subsidiary in Baltics]</p> <p>(1-3) The subsidiaries also think of headquarters' products. Sometimes, we can share with them and propose the technology products in these markets. . . . It is because we believe the potential of the product in the market. [Manager at Product Unit]</p> <p>(1-4) When we think that a technology looks good for our market, we did a market study and gathered information about [the technology]. [Manager at Subsidiary in Baltics]</p> <p>(1-5) We are meeting together with business units, and we make category plans. Because we do not produce these technological products here in Sweden, we have to import them from headquarters. . . . Then we review our product portfolio with new products. [Manager at Subsidiary in Sweden]</p> <p>(1-6) But sometimes, [subsidiary managers] are negative for new products, though we believe that these products are good for the markets. [Manager at Product Unit]</p>
<p>■ Licensing Business</p> <pre> graph TD subgraph Valio direction TB T[Technology] --> IT[Introduction of Technology] IT -- "(a) Initiative by technology sales team" --> CFM[Concern for a certain Foreign Market] IT <--> IS[Information Sharing] end subgraph ForeignCompany direction TB IS2[Information Sharing] -- "(b) Initiative by foreign company" --> CFT[Concern for a Technology] CFT --> NM["(If (a) or (b) occurs.) Negotiation"] NM --> DM[Decision Making] DM --> CTP[Commercialization of Technology-based Products] end IT <--> IS2 IS2 --> IS NM --> IT NM --> CFT </pre> <p>The flowchart for Licensing Business shows the process from Valio's Technology Sales Team to a Foreign Company. It is divided into three stages: Sensing of Opportunity, Identification of Opportunity, and Consensus Building of Opportunity. In the Sensing stage, Valio introduces technology (2-1) and shares information (2-2). In the Identification stage, Valio expresses concern for a certain foreign market (2-3) and the company expresses concern for a technology (2-4). In the Consensus Building stage, negotiation occurs (2-5) if either initiative occurs, leading to decision making (2-6) and commercialization of technology-based products.</p>	<p>(2-1) Exhibition or seminar or conferences that we have a presentation and show what we have and maybe at best successful cases from other companies. Of course, today, internet is quite important, so we have to show our presence there. [Manager at Tech Sales Team]</p> <p>(2-2) We go to exhibition of dairy technology and we meet many companies. . . . Yes, we knew LGG® in the exhibition. [Manager at Licensee]</p> <p>I often heard Valio's new technology by magazine, news, seminars and so on. [Manager at Licensee]</p> <p>(2-3) OK, this is a priority customer and this is a second customer because it is not interesting for us. And in some cases, if we would like to go there, we have identified three companies that could be potential. Then we start approaching them. [Manager at Tech Sales Team]</p> <p>(2-4) We called Valio and talked about the licensing. [Manager at Licensee]</p> <p>(2-5) What we usually do when we get requests. Because the requires in most cases contains a few words. "I am interested in this". What we usually have to do is actually to ask them for more information. What are you planning to do? What is the market you are targeting? . . . What is your company all about? . . . If ok, we propose the technology. [Manager at Tech Sales Team]</p> <p>(2-6) That is the most typical thing that companies say that it is interesting and they understand. But now they have also this and this project. They do not have resources for that. Then, they could come back later on, or they give up or they decide they do not need this product at least yet. . . . Sometimes we could get a positive decision for licensing. [Manager at Tech Sales Team]</p>

Table 3: Contexts of Evolutionary Change for Opportunity Identification

Overarching Concepts	Second-Order Concepts	Representative Quotes
Change of Location Context	Consumers' Needs	<p><Licensing Business></p> <p>(1) <i>Because our country is a kind of aging society, consumers became interested in the healthy food.</i> [Manager at Licensee]</p>
	Competitors' Activity	<p><Subsidiary Business></p> <p>(2) <i>Russian dairy market was not matured, in comparison with European markets, and people did not know about the lactose intolerance, and there was not enough public discussion about it. So, we did not commercialize it for a while in our market. . . . Some of our competitors introduced these products in Russia, and our consumers became interested in it. Then, we decided to sell it in Russia.</i> [Manager at Subsidiary in Russia]</p> <p><Licensing Business></p> <p>(3) <i>[A domestic competitor] started the commercialization of probiotic products in the market, and we also noticed the technology.</i> [Manager at Licensee]</p>
	Governmental Policy	<p><Licensing Business></p> <p>(4) <i>In 1990s, [local] government started a kind of certification about food for specified health uses. Our company wanted to get the certification of technology.</i> [Manager at Licensee]</p>
Change of Organizational Context	Organizational Strategy	<p><Subsidiary Business></p> <p>(5) <i>At that time, headquarters said the importance of technology. . . . Headquarters recommended it and shared information. So, we decided to use the lactose free milk.</i> [Manager at Subsidiary in Baltics]</p> <p>(6) <i>It was a new resource of Valio, and it became important resource of Valio. Lactose free products were appealed as Valio's innovation in headquarters. We also decided to follow it.</i> [Manager at Subsidiary in Russia]</p>
Change of Resource Context	Resource	<p><Licensing Business></p> <p>(7) <i>We already knew Valio's low lactose milk for a while. . . . In the meeting, Valio's people said that their R&D could develop a low lactose milk, which is not sweet. We recognized consumer's needs for the low lactose milk which is not so sweet. Valio's technology, lactose free technology was fit for needs.</i> [Manager at Licensee]</p> <p>(8) <i>At the end of 2000s, we decided to focus on cheese products to get more market position. At that time, we heard that Valio successfully adapted probiotic technology in cheese in Finland. We kept the relationship and we often met the contact person in Valio. We just called Valio and asked the possibility of cheese products with LGG®.</i> [Manager at Licensee]</p>
	Performance of Resource-based Business in Other Locations	<p><Subsidiary Business></p> <p>(9) <i>But we heard the success story of lactose free and we kept thinking of the potential in Russia.</i> [Manager at Subsidiary in Russia]</p> <p><Licensing Business></p> <p>(10) <i>Of course, we did not know it well at that time. But the lactose free milk was attractive, because we looked for the kind of technology for our consumers. Then, Valio introduced the success in Finland and Sweden. It showed that it is attractive enough.</i> [Manager at Licensee]</p>