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SERVICE INNOVATION COMMERCIALIZATION FACTORS IN THE FAST FOOD INDUSTRY

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Abstract. The purpose of this paper is to examine the service innovation commercialization process in fast food companies. The literature on main concepts of innovation, classification of types of innovation and its processes is well established. However, particularities and unique trends of various economies and industries in terms of innovations call for research efforts to characterize the innovation situation in specific countries and/ or industries. In addition to the regional specificity of innovation, Von Stamm (2008), Giannopoulou et al. (2014), Johannessen (2013), Hertog et al. (2010), and Oke (2007) call for discussions on peculiarities of service innovations and its commercialization specificity. The present paper focuses on the commercialization process of service innovation, while choosing as a research object innovations in the fast food industry and emphasizing the case of Lithuania. This research is relevant and innovative as not a little research has been conducted in the field of fast food restaurants. Also, many service innovation opportunities remain underutilized in the fast food industry; thus, the research question ‘What service innovations have the potential to maximize added-value in the fast food market and what is the best way to do this?’ is formulated. We attempt to identify factors that influence a company’s success in the fast food market while analysing the case of Lithuanian fast food companies. Taking into consideration that commercialization demands a thorough expertise in managing resources, strategic planning as well as managing processes from ideas generation to delivering services to the market and/ or receiving commercial value from it, the present research is centred on qualitative expert interviews among fast food companies. It serves as the theoretical conceptual framework of service innovation commercialization, and might be followed by similar research on the commercialization of service innovations.

Keywords: service innovation, commercialization, fast food industry, added-value, innovation processes.

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1. Introduction

The service sector is becoming an increasingly important part of any economy, which is contributing to a greater level of growth in terms of economic activity (De Brentani, 2001; Lankauskienė, Tvaronavičienė, 2013; Dudzevičiūtė et al. 2013; Travkina, Tvaronavičienė et al. 2013; Tvaronavičienė, Černevičiūtė 2015). The service sector consists of a wide range of activities, such as transport, government, education, health care, social and personal services, retail and wholesale, hotels and restaurants, telecommunication and financial sector (which includes banks, building societies, insurance and other companies providing financial services). The growing service sector leads to the need of innovative services. Although there is little attention paid to and knowledge obtained concerning innovation in service sectors and/ or development of new services (Drejer, 2004; Adams, 2006; Nijssen, 2006; Spohrer, 2008), service innovation is perceived as a significant driver of growth in companies (Griffin, 1997; Agarwal, 2003). Table 1 summarises different definitions and perspectives on service innovations.

Table 1. Definitions of service innovation

| Authors | Definitions of service innovation |
|--|--|
| John and Storey (1998). | Service innovation is the predominantly intangible core attributes purchased by a customer. |
| Oslo Manual (OECD, 1997). | Service innovation is defined as a type of product innovation involving the introduction of a service that is new or significantly improved with respect to its characteristics or its intended uses. |
| Miller <i>et al.</i> (2007), Lyons <i>et al.</i> (2007), Cainelli <i>et al.</i> (2004), van der Aa and Elfring (2002). | Innovation in services is crucial as it allows sustaining of competitive advantages, diminishes the threat of commoditization, and helps service companies outperform their peers, creates opportunities to increase the quality and efficiency of the delivery process and supports the introduction of new service concepts. |
| Coombs and Miles (2000), van Ark <i>et al.</i> (2003) Gallouj (2002), OECD (2005), the European Commission (2009). | Service innovations are ubiquitous and their role in creating economic growth and wellbeing is increasingly acknowledged. |
| Johannessen (2013) | Service innovations are tangible or intangible services/ products involving a customer in the design and production process of a product, or in changes in service experience. |
| Gadrey <i>et al.</i> (1995) | Service innovations are innovations in processes and innovations in organization for existing service products. Service innovations can, therefore, be described as new developments in activities undertaken to deliver core service products for various reasons, e.g. to make those core service products more attractive to consumers. |
| Pim den Hertog, Wietze van der Aa and Mark W. de Jong (2010). | Service innovation is a new service experience or service solution that consists of one or several of the following dimensions: new service concept, new customer interaction, new value system/business partners, new revenue model, new organizational or technological service delivery system. |

Source: Prepared by paper authors, based on Von Stamm (2008), Giannopoulou et al. (2014), Johannessen (2013), Hertog et al. (2010), and Oke (2007).

2. Service innovation classification

To fully understand the particularities of service innovations it is necessary to analyse various scholars' insights and arguments towards service innovation. To begin with, three types of service innovation are identified by Jung-Kuei Hsieh et al. (2013) who carried out research on a practical perspective of classifying service innovations. These are: new service concepts, new service processes and new service business models. The first

acknowledges the possibility of whether integrated or diversified service concepts, as well as improvements for existing services. New service processes include extensions for the client interface, innovations for the service delivery system and improvements for the supply chain. The last concept (new service business models) suggests a new service revenue model, the value network cooperation and a new market segment.

Terrill and Middlebrooks (1996) proposed five distinctive angles to service innovations: positioning innovation, process innovation, service offering innovation, people innovation and communication innovation. The first angle suggests positioning innovation that allows differentiating service or company itself from existing rivals (i.e. a restaurant can introduce a unique service). Secondly, process innovation allows improving customers' experience by removing or adding a particular process step. The third angle, service offering innovation, can occur differently. For example it can be a creation of unique benefits by reorganizing existing offerings, or the addition of new benefits to an existing service, or a totally new service offering. The fourth, human resource innovation is a concept described as discretion of individuals to improve a customer service experience. The last but not least, communications innovation refers to branding of a service offering or a unique communication approach to differentiate service offering.

Furthermore, DeJong and Vermeulen (2003) present the highly recognized New Service Development (NSD) concept in order to group different ideas of research made so far. They form a more ingenious perception about service innovations. Regarding the NSD concept, service innovations are segmented into four different approaches: technologist (Bryson and Monnoyer, 2004), assimilation, demarcation and synthesis (Coombs and Miles, 2000; Drejer, 2004; DeVries, 2006). The technologist approach is based on Barra's (1990) reverse product cycle model for services. The cycle starts with process innovation and leads to the creation of new services (Linton and Walsh, 2008). The approach is based only on a technological competence, ignoring differentiation between other types of services (Salter and Tether, 2006). However, such limitation raises doubts surrounding the reliability of the approach, since many service innovations tend to be non-technological like a new restaurant idea or a new form of insurance (Gallouj, 2002).

The assimilation approach is often linked with technologist perspective (DeVries, 2006), and described as the concept developed in the product sector and easily transferred to service innovation (Coombs and Miles, 2000; Drejer, 2004; DeVries, 2006; Nijssen et al. 2006). However, researchers do not rely on this approach, because it is too limited concerning technology and cannot properly describe innovations in services (Drejer, 2004). The demarcation perspective defines service innovation as distinctive and the difficulty in transferring knowledge from product sector to services. According to this approach, services are described as intangible, co-productive with customers, simultaneous, heterogeneous and perishable (Fitzsimmons, 2000), what makes them unique to a certain level (Nijssen et al., 2006). The last approach is the synthesis which, in contrast to demarcation, focuses on bringing service and manufacturing together (Gallouj and Weinstein, 1997; Coombs and Miles, 2000; Nightingdale, 2003; Drejer, 2004; Howells, 2006; Nijssen et al., 2006), and offers integrative innovation for both service and product sectors (Gallouj and Weinstein, 1997). Although researchers agree on four approaches when defining service innovation, (technologist, assimilation, demarcation and synthesis), synthesis innovation is the most recognized and relevant perspective (Gallouj and Weinstein, 1997; Coombs and Miles, 2000; Drejer, 2004; Miles, 2006; Salter and Tether, 2006; Froehle and Roth, 2007).

Continuing with the synthesis approach, Gallouj and Weinstein (1997) have presented the theory which treats service and product innovations inseparably. It states that service innovations are found in for distinct elements:

- Service outcome characteristics (i.e. new ingredient in a meal, new design of restaurant interior),
- Service provider competencies (i.e. new knowledge and new skills),
- Service provider technology (i.e. new informational technologies, new machines, new methods and procedures),

- Client competences (i.e. client provides on stock-level to supplier).

The model also introduces six different types of service innovations that are radical, incremental, improvement, combinatory or architectural, formalization and ad hoc innovations. The majority are based on previously defined competence-enhancing and competence-destroying types of innovation of Schumpeter's et al. theory. In addition, Gallouj and Weinstein (1997) added a distinctively new type of innovation in service sector – ad hoc innovation, which is defined as interactive and social solution to a particular problem, outlined by a client (DeVries, 2006). The need of ad hoc innovation arises after a customer request. It is a non-repeatable and not formalized as a standard type of service innovation, contradicting Schumpeter's theory. Moreover, after research and successful implementation, it is held as a valid type of innovation (Drejer, 2004; DeVries, 2006).

Another perspective for categorizing service innovations is the four-dimensional service innovation model, suggested by Den Hertog (2000). He offers the approach, based on service and process interaction, arguing that services cannot be innovated focusing on a final result only, since it involves changes in different parts of services in organization. Den Hertog (2000) suggests four dimensions where innovation can be implemented: new service concept dimension, new client interface dimension, new service delivery system dimension, and technological options dimension.

Recently, a different approach to service innovation was introduced by Jing Hua Li (2012) who carried out research on service innovation in China. He presented a cross framework where he distinguished four branches of service innovation regarding different internal and external factors influencing the distinction of innovation types (see Figure 1).

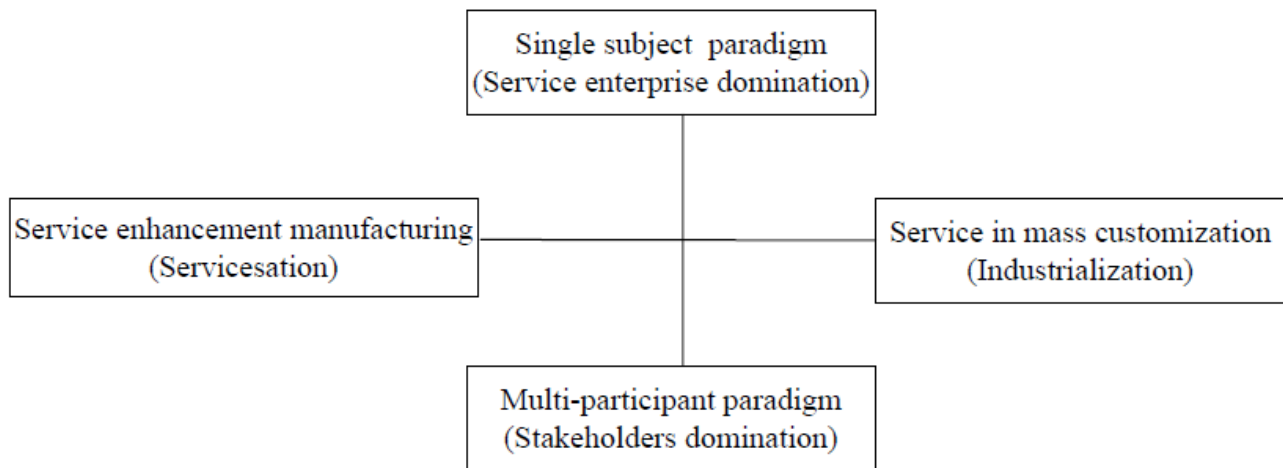


Figure 1. Roadmap of service innovation.

Source: Hua Li, J. (2012). Service innovation research in China: past, present and future. *Journal of Science and Technology Policy in China*. Vol. 3, No. 1, pp. 68-91.

The first branch is a single subject paradigm which defines service innovation as service enterprise dominated focus on organizational issues. Research provides many examples where service innovation might occur in the organization. Pavitt (1984) presents four different patterns: supplier-dominated, specialized suppliers, science-based and information intensive. The organizational mode of service innovation can also be divided into patterns: industrialization, professional co-operation, management (Barcet et al., 1987), entrepreneur and handcraft patterns (Gallouj and Weinstein, 1997). Finally, Tidd and Hull (2003) divided service innovation into four types: craft-

batch – has the best service delivery, mechanistic bureaucracy – the lowest cost efficiency, hybrid mechanistic-organic – the best total performance, and organic technical-batch – considered as the most innovative.

The second branch of Jing Hua Li's (2012) framework is a multi-participant paradigm of service innovation emphasizing the stakeholders' domination. It distinguishes new types of innovations, such as stakeholder innovation (Smith and Fischbacher, 2005; Sheng et al., 2007), open innovation (Chesbrough, 2003; Chen and Chen, 2006) and total innovation (Zheng, 2006; Xu, 2007). The main idea of this multi-participant paradigm is the triangle model – 'main service provider – partners – customer' (Lu et al., 2010). It shows that service innovation can be considered as a system including all parts of service chain, such as service production, consumption, service design, etc. (Jing Hua Li, 2012).

The third branch includes the factor of customization in services which arises from service provider and customer interaction, and which is rationalized by mass manufacturing (Peters and Saidin, 2000). In this case a new service is a result of the service provider and customer together. The fourth branch identified by Jing Hua Li (2012) is service enhancement manufacturing. Here service innovation occurs as a result of manufacturing and service interaction. It becomes independent business of manufacturing (Davies, 2004). This means, when a manufacturing company introduces a product, the need of services, such as a product design, marketing, brand and financing, appears (Wise and Baumgartner, 1999). These kinds of services for manufactured products become areas of service innovation.

Moreover, recent research provides one more paradigm of service innovation which is the 'open innovation paradigm' (Chesbrough, 2003). It is an emerging concept of service innovation which contradicts those previously discussed and considers them as closed and unsustainable innovations. Chesbrough (2003) describes open innovation as 'the use of purposive inflows and outflows of knowledge to accelerate internal innovation and to expand the markets for external use of innovation, respectively' (Wynarczyk, 2013). Therefore, open innovation allows companies to use external and internal paths to the market, such as existing technologies and know-how, fosters collaboration with other organizations and institutions, such as universities and etc., and provides better opportunities to gain advantage and commercialize new service innovations (Chesbrough, 2003; Laursen and Salter, 2006; Clausen and Pohjola, 2009; Gassmann et al. 2010).

3. Commercialization of innovation

Commercialization of innovation can be described as a sum of activities required for introducing innovation to the market (Nerkar and Shane, 2007; Nambisan and Sawhney, 2007). Burgelman, Christensen, & Wheelwright (2006) broaden this definition and state that these activities lead to new, marketable products and services, or new product-delivery systems. These activities include the development of production and marketing capabilities, assets, such as manufacturing facilities, service and distribution networks, management involvement, organizational culture etc.

According to Nerkar and Shane (2007), success in commercialization of innovations is of strategic importance to firms, because it helps to dominate markets or develop new markets, which contribute to the leadership in an industry (Wallsten, 2000). However, only one of every 3000 new innovation ideas is commercialized into a successful product (Stevens and Burley, 1997), because of the four innovation phases mentioned earlier. When innovation is first introduced to the market, the first ones to adopt it are technology enthusiasts, so innovation is held successfully commercialized when it reaches the 'mainstream' market of conservatives (Moore 2000). A firm's capacity to reach the mainstream market as fast as possible defines the success of commercialization. However, Teece (2010) provides another important insight. He states that while commercializing a new product or process the first, a company does not necessarily make profit from innovation, which is often captured by a fast second or third entrant. In 1986 he added the concept of 'Profiting from Innovation', which is a framework that

provides the explanation for the influence of managerial decisions, intellectual property protection, and the asset structure of a firm, which helps capture value from its innovation.

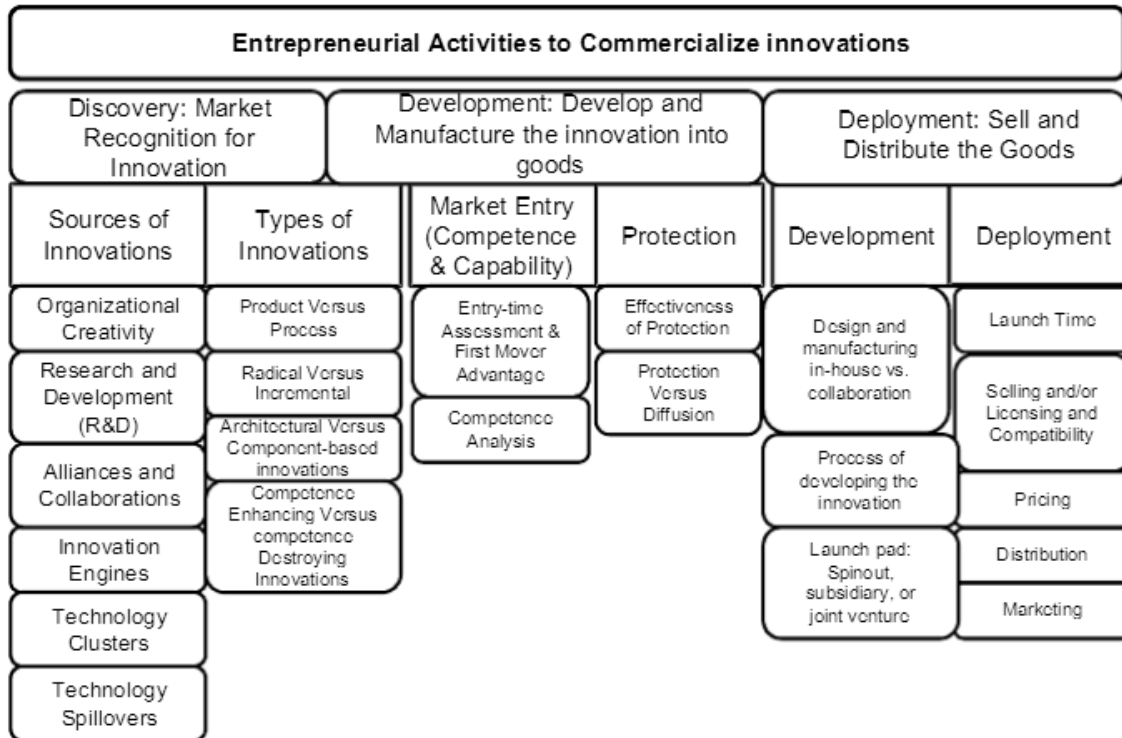


Figure 2. Entrepreneurial steps to commercialization of innovations.

Source: Crossan, M. M. Apaydin, M. (2010). A Multi-Dimensional Framework of Organizational Innovation: A Systematic Review of the Literature. *Journal of Management Studies*. Vol. 47, No. 6, p. 1154-1191.

Figure 2 complements Teece's framework and represents how the process of innovation commercialization is distributed over six main topics: *innovation source*, *innovation type*, *market entry*, *protection*, *development* and *deployment*. The innovation sources-related literature also outlines:

- Organizational creativity – ‘a function of creative individuals and a variety of social processes that shape the way individuals interact and behave’ (Woodman et al. 1993, Schilling and Phelps, 2007);
- R&D as a key and a source for new ideas, sales from new products and profitability. (Roberts, 2001, Hagedoorn, 2002);
- Alliances and collaborations – diverse entities create an opportunity to commercialize innovations, because of knowledge sharing and transferring (Anderson, 2008), for example, networks of customers, suppliers or competitors, which generate new product ideas and help to share knowledge;
- Innovation engines, in other words – universities and government, these two institutions invest and create policies to foster growth of innovations by creating technology transfer offices, incubators, laboratories, and offering grants (Wallsten, 2000, Cohet et al. 2002);
- Technology clusters – a high density of firms in one geographical area often leads to new start-ups of technology firms, that are highly innovation-productive (Stuart and Sorenson, 2003);

- Technology spill overs – a ‘positive externality from R&D resulting from the spread of knowledge across organization and regional boundaries’ (Schilling, 2006).

To continue, *four main dimensions of innovation* need to be discussed in-depth in order to understand the process of commercialization:

- Product vs process innovations – innovations in improving the effectiveness and efficiency of production, such as reducing defect rates or improving supply chain mechanism, which often result in innovative outputs of production – product innovations (Schilling, 2006, Klein et al, 2007);
- Radical vs incremental – two opposite types, where the first means new and totally different innovation, which results in radically new products and services, and the second, which often follows the first one and involves adaptations, refinements to existing products and services (Burgelman et al. 2006);
- Architectural vs component innovations – architectural innovations tend to change the overall structure of a system or the interaction between system components – they often redefine product functionality and even drive market innovation. Component innovations have benefits for individual components but do not affect the overall structure of a system (Christensen, 1992);
- Competence enhancing vs competence destroying innovation – some innovations enhance existing knowledge base and some do not, but instead build new competences.

The market entry concentrates on three main activities: entry time assessment, first mover advantage and competency analysis. Most scholars analyse entry time assessment and first mover advantage together, because they are highly related and often tend to overlap. Entry time assessment is a function of the margin of advantage deriving from a new innovation, the state of enabling technologies, the state of complements, the state of customer expectations, threat of competitive entry, whether the industry faces increasing returns, and firm’s resources (Shaw, 1984, Aaker and Day, 1986, Makadok, 1998, Schilling, 1998, Shamise et al, 2004). The successful assessment of entry times gives a first mover advantage, which has many benefits, such as: brand loyalty and reputation, capturing scarce resources, increasing returns from learning-curve effects and network externalities (Urban et al, 1986, Lieberman and Montgomery, 1988). Despite that, there are some disadvantages as well: consumer ambiguity, poorly developed infrastructure of suppliers and distribution channel and high technology and R&D costs (Shaw, 1984, Lieberman and Montgomery, 1988, Shamise et al, 2004). The competency analysis includes the company’s ability to distinguish itself in the market place (Prahalad, 1993). It is achieved through the combination of skills and resources – in order words – harmonizing technologies, asset interactions and organizational routines all together (Reed and DeFillipi, 1990, Barney 1991)

Since innovation is considered as intellectual property, an important stage of the commercialization process is the *protection*. The biggest issue is the appropriability, (this term is related to discussions on intellectual property rights and factors influencing the value creation from innovations) which is the issue of how quickly an innovation can be imitated (Cohen and Levinthal 1990). Three main tools for the protection of innovation are: patents, trademarks and copyrights. Their efficiency is different in different industries, for example – they are more beneficial in biotechnology industry than in electronics and software (Schilling, 2006, Burgelman, 2006). These tools help companies fight reverse engineering, which is a big issue and makes the process of protecting intellectual property difficult, especially, when the mobility of knowledge workers is high (Schilling and Phelps, 2007).

Another important issue is the choice between protection and diffusion. Most companies neither use one or the other, because both strategies have advantages and disadvantages. Strict protection means higher earnings on

rents, which can be reinvested into further development of technology; it preserves architectural control and enables the company to win against competitors (Henderson and Clark, 1990). On the other hand, the diffusion promotes distribution of technology and accelerates its development. Shane (2002) and Burgelman et al (2006) suggest that it is best to control standards through licensing or to have a dominant design that ensures monopolistic rents. Diffusion is the best tactic when a company has neither adequate resources to be the only developer, producer, distributor and marketer (Garud et al, 2002) nor has strong competitors, who can quickly develop a better version of technology (Hill, 1992).

In the *development* phase, a company needs to decide on three main issues:

- Manufacturing in house or creating alliances and joint ventures with other firms – it depends on many factors, such as possession of resources, availability of technology, importance of controlling the development process and the access to another firm's capabilities (Kwak, 2002, Soosay and Hyland, 2008). Usually firms that have necessary capabilities to develop a product and want to protect their technology choose in-house manufacturing. Collaboration also increases the time between conceptualization to commercialization of innovation (Golder et al, 2008). However, collaboration gives advantages, such as sharing risks and costs, combining skills and resources, transferring knowledge, and creation of shared standards (Gulati and Gargiulo, 1999, Litan et al, 2007, Provan et al, 2007). Therefore, forms of collaboration such as strategic alliances, joint ventures, licensing and outsourcing occur (Barringer and Harrison 2000, Provan et al, 2007).
- The process of innovation development – innovation commercialization literature outlines three objectives that need to be achieved in order to ensure successful product development: maximize fit with customer requirements, minimize entry time and control development costs. Different authors emphasize different means to achieve these objectives. Cohen and Levinthal (1990) suggest paralleling development processes among marketing, manufacturing, and R&D. According to Cristiano et al. (2001) and Lilien et al (2002), it is crucial to involve customers and suppliers in product development to ensure the quality and sustainability of a product, satisfying consumer needs, which help to minimize the cost and fasten the market entry. Finally, Schilling (2006), Litan et al (2007) suggest employing various stage-gate processes and CAD/CAM (Computer added design/manufacturing) tools for blueprinting, reducing cycle times, improving product quality and controlling development costs.
- Launch form – there are many ways to launch an innovation. Besides a traditional way of launching solely by one firm, there are other means as spin-outs, subsidiaries or joint ventures. According to Burgelman et al. (2006) it usually depends on the scope of innovation or the risks of market entry.

Deployment – the last stage of innovation commercialization, where the most important issues are launching time, licensing, compatibility, pricing, marketing and distribution. This stage includes the revision of the business cycle, seasonal effects; decision whether to sell out or license an innovation; pricing techniques, such as penetration pricing or market skimming; distribution methods – whether it is through the website, mail or intermediaries; and marketing efforts, which include cost, reach, content, targeting, innovation positioning, image, reputation etc. (Slater and Mohr, 2006).

During the described process of commercialization, the literature outlines the two most important issues that companies should focus on. The first topic, which, according to Zahra (1996), should be considered is whether to leave development and commercialization in house, commercializing with others using alliance or licensing method or selling to others to commercialize. Usually these decisions are impacted by the amount of profit available and company's existing capabilities to commercialize the innovation. When capabilities are available

innovation development will be executed in-house, but if they are not – most probably a company will chose to source them externally, which will reduce rental costs. Kogut and Zander (1996) provides a solution to develop capabilities internally by assessing the current knowledge, exploring newer technologies and organizing principles into future market developments. However, this requires a long term investment and does not provide immediate results.

In case of unavailable capabilities, but high possible returns from innovation, Friedman (2006) suggests finding partners or licensing the innovation out. The same suggestion is applicable if potential returns are low, but capabilities are available. Schilling and Phelps (2007) noted that firms could not ensure their dominance in terms of technology of an innovation and secure industry-wide advantage by licensing. By creating complementary assets a licensor gains tactic knowledge. Finally, when potential profits are low and capabilities are not available the best option is to sell the innovation. This would minimize the risk for a firm assuming the deal would not end up with a buyer becoming a future competitor.

Another important issue, which should be considered by companies is that radical innovation have significantly higher value that incremental ones. O'Reilly and Tushman (2004) suggest that radical innovation is very important to the firm longevity, and successful firms ten to develop radical products without hurting existing markets. In other words, the more radical innovation is the bigger competitive advantage a company can gain. An important issue for companies is how to enter the market with a radical innovation. Since radical innovations require new capabilities and even new venture to drive the innovation, there is a high possibility of licensing the technology or developing it together with partners. In the case of a very high potential profit, a company might consider in-house commercialization, which might be done by creating a separate division, performing a spinout or integrating with existing in-house activities.

To stay competitive in the market, a firm has to perform well in many areas of business. Firstly, it should create the environment available for knowledge sharing and diffusion, which is supported by a variety of internal mechanisms. Secondly, it is crucial to create alliances with external partners in order to access direct resources, knowledge and capabilities. Thirdly, firms should employ innovation engines, such as universities, research organizations and laboratories. And finally, firms should create an organizational culture and an internal company network, where the top management are visible and reinforce commercialization process (Nevens et al. 1990). In this way, a nurturing environment for innovation commercialization is created, deadlines are met, decision making is fast and internal social relations exist.

4. Innovation in fast food companies

The fast food restaurant industry is a significant and growing sector of the overall food industry, providing a quick and convenient service at a relatively low cost. Based on the English dictionary, a fast food is a type of meal that is often pre-prepared and served quickly (Anand, 2011). Monitor (2005) proposes a definition of the fast food industry stating that it is the sale of food and drinks for immediate consumption either on the premises or in designated eating areas shared with other food service operators, or for consumption elsewhere (Anand, 2011).

In contrast to technology-based industries where innovation is perceived as a vital factor for business development, in the food and beverage industry service providers and users are conservative in terms of radical changes in production and consumption (Sarkar and Costa, 2008). Beckerman and Skjolkebrand (2007), after research done on the degree of innovativeness in the food industry, conclude that few innovations are introduced to the market due to consumer risk aversion. Low involvement in service innovations of the food and beverage industry compared to technology-based industry is also affected by a low budget contribution to research and development (Christensen *et al.*, 2006, Avermaete and Viaene, 2002; Wilkinson, 2002; Steward-Knox and Mitchell, 2003; Galizzi and Venturini, 2008), which is considered as one of the most important factors leading to service innovations (Toivonen and Tuominen, 2009). In addition, compared to industries like the pharmaceutical

and computer industry, there have been significantly fewer products introduced to the market over the past ten years, and fewest patents for new products registered (Mersiha Tepic *et al.*, 2012). Nevertheless, in recent years, changes in trends and perceptions of society in food consumption required the response of technical and economic changes in the production of food (Anahita Baregheh *et al.*, 2011). Hence, innovation is an important factor in expanding a competitive market (Capitano *et al.*, 2010; Grunert *et al.*, 1997; Rama and Von Tunzelmann, 2008).

Companies, instead of looking for technology-based innovations, focus mostly on recipe development, trying new marketing strategies and operational improvement. Key factors for increasing operational advantage of international fast food organizations are high volumes, standardization, centralized planning, human resource and aggressive marketing. Mahmoud M. Yasin *et al.* (1992) describe fast food restaurants as a unique operational system designed to provide customers with efficient and responsive services. For this reason he distinguishes three operational areas where innovative improvements are essential for fluent work of fast food restaurants, which are: input, processing and output subsystems. A successful operation of any fast food restaurant is underlined by co-operation and development of these subsystems (Mahmoud M. Yasin *et al.*, 1992). In order to improve the efficiency, quality and responsiveness of service, fast food companies must pursue the service innovation of the internal operational environment including ordering and stocking systems, inventory management and customer service etc.

Looking through the history of innovations commercialized in the fast food industry it is crucial to mention technological and operational improvements that lead large companies to increase service efficiency and gain competitive advantage. For example, Kentucky Fried Chicken Corporation in the 1930s introduced 'vegetable pressure cooker to fry chickens', which reduced waiting time and improved the quality, as well as reduced preparation time, leading to lower labour costs (Kimes *et al.*, 1999). Another example is McDonald's which presented make-to-stock, assemble-to-order and work-to-process concepts (Davis *et al.*, 2002). As a result, these innovations in internal organization had an impact on the whole service quality and work efficiency.

Consequently, the fast food industry was influenced by innovative American fast food giant companies such as McDonald's, Kentucky Fried Chicken, Pizza Hut, Domino's, etc., which successfully expanded their business internationally (Ritu Anand, 2011). The fast food industry was highly affected by traditional American style food, which included pizzas, hamburgers, chicken burgers, etc. Nevertheless, given the changing trends and increasing popularity of perception towards healthy style of living, fast food companies started to pay more attention to healthy food and product availability (Bijnen *et al.*, 2002). As fresh food popularity increased, such companies as Maid-Rite, Subway Sandwiches and Cozi emerged and differentiated themselves as healthy-style fast food restaurants by introducing healthy baked bread and other fresh ingredients (Cha, 2006). As an example, Iranian fast food company Shila was established in the local market in 2002, successfully positioned itself on the healthy food market and became the fastest selling company in the local market (Momtaz *et al.*, 2013).

The research of Matthyssens *et al.* (2008) highlights value innovation as a driving factor of new processes and business models in the functional food industry. Value innovation is perceived as a reconceptualization of a business model and delivery modes (Matthyssens *et al.*, 2008) and considered as disruptive innovation leading to the establishment of new markets and disruption of industry leaders (Christensen *et al.*, 2002). This kind of innovation proposes radical changes in the food industry creating opportunities for new products and services. Matthyssens *et al.* (2008) explain that value innovation occurs in the value chain of food industry where suppliers, midstream companies such as Unilever, Nestle and P&G, and retailers are involved in the innovation process. The author identifies three management aspects that innovative food companies develop in order to realize value innovation. They are the market sensing generating deep customer insight, complemented with the building of a real entrepreneurial culture and with value chain management competences (Matthyssens *et al.*, 2008).

Going deeper to the analysis of the fast food industry of rapidly developing economies, an overview of such countries as Lithuania is important to understand the regional peculiarities of this industry. For instance the importance of catering services is increasing in Lithuanian household consumption (Anna Dabrowska, 2011). It is still relatively small, compared to developed countries, but there is a rapid expansion forecasted in a 10-year period. There is a visible moderate expansion of the fast food market in Lithuania. It is happening because of the population's standard of living, modernized consumption structure and shift in consumer perception on fast food. This is also influenced by the globalization process, socio-political changes and new market entrants, such as McDonald's, Pizza Hut, KFC and Subway (Subway has opened the first restaurant in Lithuania on May 1st, 2014). Furthermore, the fast food market is highly related to saving time, thus, catering services are gaining higher importance.

According to the 'Study Report on Franchising Attractiveness of Lithuanian and Latvian Border Regions' conducted by Brand4balticC research agency, the Lithuanian market is recognized as an emerging fast food, takeaway coffee, Turkish kebab and wine consumption market. Currently, the fast food market in Lithuania is led by international food chains, but there is noticeable increasing competition from local food chains. The most dominant type of food consumed in the current fast food market is pizza, but it is rapidly followed by exotic cuisines, such as Japanese, Chinese and Thai. Finally, the study report outlines that there is a noticeable upward trend of healthy food choices in the market.

5. Methodology

Relying on the argument that innovation commercialization is most successful when it reaches the mainstream market (when many people start using and acknowledging it), the intention was to find out what innovations in Lithuania are the most attractive for customers and could be the most profitable, as well as provide insights on how to commercialize them most efficiently. This research is relevant and innovative as little research has been conducted in the field of fast food restaurants. More popular areas are fine dining (Ottenbacher and Harrington, 2007), food manufacturing (Harrington, 2004) or studies that are not applicable to the current environment. Furthermore, frameworks deriving from previous research pay insufficient attention to customer research and lack theoretical marketing concepts. Most of studies use a case study approach. Within the present research a qualitative research method is used to analyse the internal commercialization process in fast food companies. This ensures that results are accurate and detailed and provides an extensive overview from the enterprise perspective.

The qualitative research method, expert interviews, was used to find out if companies in Lithuania pay any attention to innovation commercialization process and to compare them with international companies in order to acknowledge if the process is facilitated while using techniques described in the innovation commercialization literature. The commercialization process is a more theoretical process, which mainly addresses theory building rather than theory testing. Ghauri et al. (1995) claim that a qualitative research is appropriate to use in organizational research when the goal is to better understand complex issues and processes that would not be apparent in survey responses. According to Carson and Coviello (1996), detailed qualitative data can only be obtained by getting physically and psychologically closer to the phenomenon through in-depth interviews. This conclusion was also confirmed after reviewing other research made on innovation commercialization. The table represents a summary of previous research carried out on innovation commercialization, which contributed to the development of the methodology used in this research paper.

Table 2. Overview of innovation research.

| Name, Author, Year | Methodology | The Goal | Results |
|-------------------------|------------------------|-------------------------------|---------------------------|
| A customer oriented new | Elite quasi-structured | The goal of this paper was to | Developed a framework for |

| | | | |
|---|---|---|--|
| service development process. Ian Alam and Chad Perry (2002) | interview method to probe the processes used by managers in developing new services for their firms. Open-ended questions and some five point Likert scale questions with “very important and “not an issue” as anchors. Interview protocol was developed using prior theory. | develop a model for new service development and analyse customers’ input to new service development | new service development, emphasized the importance of a customer. |
| Value innovation in the functional foods industry: Deviations from the industry recipe. Paul Matthyssens, Koen Vandenbempt and Liselore Berghman (2008) | Five exploratory interviews with industry experts and product managers of different functional food suppliers and in-depth study of secondary material. | To observe value innovation initiatives in the functional foods industry | Proposed three categories of management practices that innovative food suppliers seem to develop in order to generate new value concepts. Emphasized the importance of entrepreneurial and competence building culture and innovation blockers. |
| The product innovation process of quick-service restaurant chains. Michael C. Ottenbacher and Robert J. Harrington (2008) | Semi-structured interviews with six highly respected restaurant chain executives from six different organizations | To outline the innovation process activities described by quick-service restaurant (QSR) managers and to compare it with an earlier QSR process model and with those used in other food service settings. | Emphasized the importance of iterative screening, testing and feedback loops to reduce risk of failure, increase product quality and improve customer satisfaction. Outlined the need for market research as well as the use of “platforms” to build on earlier learning, speed the process and increase efficiency. |
| The innovation development process of Michelin-starred chefs. Michael Ottenbacher. Robert J. Harrington (2007) | 12 semi-structured interviews with Michelin-starred chefs in Germany from total 190 restaurants in Germany. | To compare and contrast the innovation process described by Michelin-starred chefs with existing theoretical innovation process models. | Outlined similarities and differences to traditional concepts of new product development, emphasized the important role of employees in innovation process |
| Exploring the synergy between entrepreneurship and innovation. Fang Zhao (2005) | 6 semi-structured interviews were conducted to examine the perceptions of senior managers regarding entrepreneurship and innovation, and the factors that contribute to the development and integration of entrepreneurship and innovation. | To study factors affecting the development of entrepreneurship and innovation, and how interaction between them affects the commercialization of innovations. | Entrepreneurship and innovation are positively related and complementary, however they are not confined to the initial stages of a new venture; rather, they are dynamic and holistic processes in entrepreneurial and innovative organizations. |

Source: Prepared by paper authors, according to Alam, I. Perry, C. (2002), Matthyssens, P. Vandenbempt, K. Berghman, L. (2008), Ottenbacher, M. C. Harrington, R. J. (2008), Ottenbacher, M. C. Harrington, R. J. (2007 and Zhao, F. (2005).

Further analysis employed a semi-structured interview model for data collection. This method is flexible, because there is always a possibility to change questions according the flow of the interview and adapt to the situation. A survey prepared in advance was used to collect a necessary data from respondents. However, respondents could talk freely and add anything they wanted to their answers without any interruption, and their anonymity was ensured.

The questionnaire was composed of five questions: there were four open-ended questions and one Staple-scale based question, where respondents were asked to evaluate the importance of innovation in their business from one to ten, one meaning not important and ten very important. Questions were provided in a chronological order, firstly by presenting the analysis, then asking to state one or some specific innovations, that were implemented by a company. This was then followed by two questions about differentiation and business success factors; one Staple-scale based question was asked in order to examine the importance of different innovations in business and finally, an open question was related to the commercialization process within a selected company. The average length of an interview reads 15-20 minutes.

A small sample used for this analysis, four restaurants, is enough to represent the Lithuanian market, to compare opinions of various respondents accurately as well as to make conclusions and foundations for future research. There were three successful and innovative, international fast food chains operating in Lithuania as well as one small Lithuanian based fast food company selected. This allowed comparing International and Lithuanian service innovation commercialization processes and providing recommendations accordingly. Four experts representing fast food restaurants were chosen. According to Bitinas (2008) – expert is a status that is given to a person by a researcher, according to the field and topic of a study. An expert has a lot of knowledge and experience in the field, which is not available for everybody. He/she is able to share it and contribute to a study. He is the main source of information. In the present study, a set of franchise owners were selected as experts, having in mind the size of restaurants.

Chosen respondents:

- “Petros Chilli and Chips” – U.S based traditional fast food restaurant, operating on a franchise model. The Head marketing director filled in the online survey.
- “Wok to Walk” – a chain of successful Thai food restaurants, where people can order fresh, takeout food, which is prepared in 5 minutes. It is based on a franchise model. The interview was conducted with the franchise owner in Lithuania.
- “Subway” – a customizable sandwich restaurant, with 41782 restaurants around the world. It is based on a franchise model. A face-to-face interview was conducted with the franchise owner in Lithuania.
- “Jammi” – medium-sized Lithuanian 24/7 kebab restaurants chain, with 6 restaurants in Vilnius. During an interview, the restaurant owner was questioned.

The comparative analysis was used in order to summarize and compare research results. The main goal of this type of analysis is to evaluate the respondents’ perception on the topic, according to his/her experience and explain the difference between theoretical description and business reality. In order to make extensive and viable analysis of commercialization processes it is most appropriate to overview commercialization processes according to the framework provided in the theory of innovation commercialization. Experts’ answers to interview questions helped to test this framework and provide accurate insights about the process.

6. Results

Service innovation commercialization peculiarities in fast food companies

Planning, organising and managing sources for innovations are one of the most important stages of the commercialization process. Figure 3 provides an overview of existing sources of innovation, which were identified by fast food restaurants’ experts.

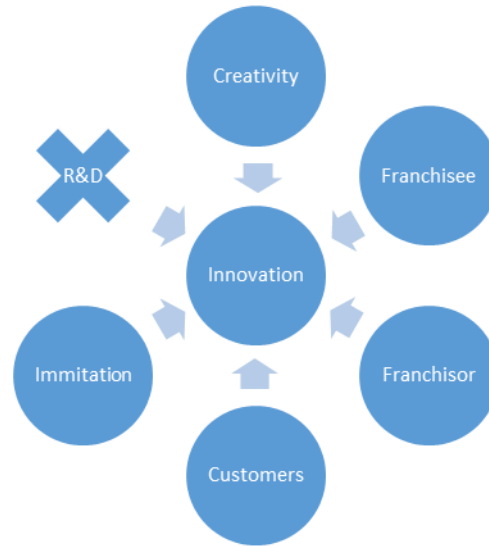


Figure 3. Sources of innovation.

Source: Prepared by authors, according to experts' answers.

The most significant source of innovation in the fast food companies questioned is *organizational creativity* – all four experts outlined the importance of creativity in their companies. Experts also mentioned several tools to reach it, such as staff meetings, innovation days (where all employees brainstorm and generate new ideas) products or services (employees of “Jammi” introduced their famous kebab soup, which now is one of the most popular dishes), magazines, international exhibitions, etc. Another important source of innovation is a relationship between *franchisor* and *franchisee*. Three of four analysed food chains are based on a franchise model, which gives a lot of information about commercialization process in franchise-based fast food chains.

Experts mentioned that innovations can arise in two ways. Firstly it can be encouraged by a *franchisor* – usually technological innovation, implementation schemes and “know-how”. Secondly, innovations can be induced by a *franchisee* - owner of a franchise in a specific country, who is responsible for innovations in that unit. Usually these innovations are affected by demographical characteristics of the restaurant location and adapted to customers' behaviour of that area. For example, one expert mentioned, that a new unit in Lithuania is the only one out of 41,782 restaurants in the world, which decided that adding sauce in the middle of sandwich making process would save time. Since Lithuanian customers are inexperienced and unfamiliar with new types of sauces served in that restaurant, adding sauce in the middle of the process would give them more time to decide about the sauce, because they have to wait while their sandwich is toasting in the oven. This saves around 20 seconds per customer. Serving 4000 customers a week saves around 22 hours a week. The main goal of this process innovation was to reduce the number of customers standing in the queue and be more efficient in serving them. It is a good example of how innovation was implemented by a franchisee's efforts. These types of innovations might be also transferred to an international level.

Thirdly, an important source of innovation is customers and community. Three of four experts mentioned that they try to involve customers and community in ideas generation and commercialization process. Companies participate in events such as Fall Festivals and Fun Days, etc., also gather feedback and have “create your own food” campaigns. Finally, it is worth mentioning that imitating international chains might be considered as a source of innovation. All experts shared strong opinion that it is crucial to observe other restaurants in order to improve services and develop new ones. In addition, none of the restaurants which were interviewed has separate

R&D departments for new product development. That is because all units are small. They do not have the capability and resources to implement such activities and are not highly related to technology, which is the main interest of most R&D departments.

Furthermore, it is necessary to analyse what types of innovations are most frequently implemented by fast food companies. Innovations are highly related to differentiation and positioning in the market, because they give competitive advantage and first mover advantage. Experts were asked to identify specific innovations that helped to gain competitive advantage and differentiation on the market in order to find out the extent of innovativeness in each company and to make conclusions about the type of exercised innovations. Figure 4 summarises the results regarding all innovations mentioned during the interviews: four main types of innovations were noticed.

| Product | Process | Service | Marketing |
|---|---|--|---|
| <ul style="list-style-type: none"> •Kebab soup •Customizable sandwich •Freshly baked bread | <ul style="list-style-type: none"> •Putting the sauce in the middle of sandwich making process •Innovation days •Opening a unit in church •Selection of free vegetables and sauce | <ul style="list-style-type: none"> •First drive-through kebab restaurant •Sandwich made in front of customers eyes •Choosing a drink from a touchscreen (Self-service) •Working 24/7 | <ul style="list-style-type: none"> •Foursquare application •Beta.lt coupons •Emotional connections marketing |

Figure 4. Types and examples of fast food innovations.

Source: prepared by authors, according to experts' answers.

Most of these innovations are incremental, since all improvements are supplemented with existing measures, according to the needs of customers, and not highly related to technology. Furthermore, it can be outlined that, according to organizational characteristics, innovations in fast food companies can be divided into external and internal innovations, mostly dominated by external ones, which are mostly related to customers. Innovations, such as 'innovation day' or putting a sauce in the middle of a sandwich making process are considered to be internal innovations, because they are implemented inside the organization, and customers are not aware of that. Nonetheless, mostly fast food companies apply external innovations that are related to new products, services or new marketing concepts. Companies are mostly concerned about attracting and retaining customers. Thus, a conclusion can be made – fast food companies concentrate on marketing innovations, which were most widely mentioned by experts. All these innovations brought many advantages, such as: 'Strengthened relationship with customers', 'saved 22 hours a week', 'created a habit through innovation', 'returning customers', 'customer satisfaction', 'long term reputation', 'improved efficiency', 'competitive advantage' and 'raving fans'.

The next stage of commercialization is the market entry and protection. None of analysed companies had first mover advantage; none of them were first to enter a market with a completely new product or service, but continuous incremental service, process and marketing innovations ensured a significantly high market share and returning customers. This allows companies to evade the customer ambiguity and poorly developed infrastructure of suppliers and distribution channels. The research confirms Schumpeter's (year), Lundvall's (year) and Drucker's (year) ideas that a pure new idea does not by itself lead to implementation and has to be managed by a strong personality (entrepreneur, franchisee) and implemented through his/her influence. Furthermore, innovation

does not necessarily have to be technical, but can be related to knowledge management, which enables people, with different skills working together with an organization, to explore new opportunities.

This reveals that the Lithuanian fast food market is mainly based on service, process and marketing, rather than product innovations. The research also revealed that companies do not use any protection tools for innovations. None of the experts mentioned patents, trademarks or copyrights. However, protection methods are not as relevant, since mainly service and process innovations are commercialized and protection tools are usually used for technological innovations. This innovation diffusion strategy makes it easier for new entrants to establish themselves in the market. This is why the fast food market is constantly entered by small competitors, which have their own small customer base or drop out very soon, due to a lack of resources and experience. This does not create an issue for the bigger companies analysed by this research.

The next stage outlined by innovation commercialization literature is development. The survey revealed that fast food companies mainly use in-house operations to develop and commercialize innovations. The exception is when a franchisor transfers technological innovations and standards to the franchisee, for example – food preparation and equipment schemes. This collaborative method allows saving costs, which provides an advantage over other companies that take care of their innovations and operations on their own behalf. Another form of collaboration mentioned by experts was partnerships with other businesses to help each other to reward employees and provide programs and services for their customers. This is more linked to process innovation rather than technological innovation. It also ensures sharing knowledge and standards, which eventually leads to a successful process of innovation commercialization.

It is important to mention that all interviewed food chains screen new food ideas in regards to operational aspects. A good example was outlined by one expert – a new entrant to the Lithuanian market (worldwide restaurant “Subway”), decided to not show any marketing efforts and open quietly. This choice was made in order to:

- screen products and services
- identify if it had all the necessary equipment to prepare food
- enhance employees’ skills and knowledge to serve customers quickly and according to high standards
- to see if new ideas and innovations are acceptable in the Lithuanian market.

This market entry technique is innovative in itself, but it is only applicable for companies with a well-known brand, which has a well-established reputation.

During the interviews the most emphasized stage of the innovation commercialization process was deployment stage, especially the marketing part. Three of four experts mentioned various marketing innovations and emphasized the importance of continuously seeking innovative ways to reach customers, such as applying internet technologies (Foursquare, Beta.lt coupons), which is partly a technological innovation, employing new marketing schemes (emotional connection marketing, involving customers) and involving in-community activities (churches, schools, non-profit organizations). All these can be characterised as marketing innovations.

Figure 5 provides a summarized framework of innovation commercialization, which is revealed after questioning all four experts: one USA-based restaurant, two franchise-based international fast food chains with single units in Lithuania and one medium-sized local fast food chain. This is most widely applicable in the Lithuanian market, since three of four analysed restaurants are established in Lithuania.

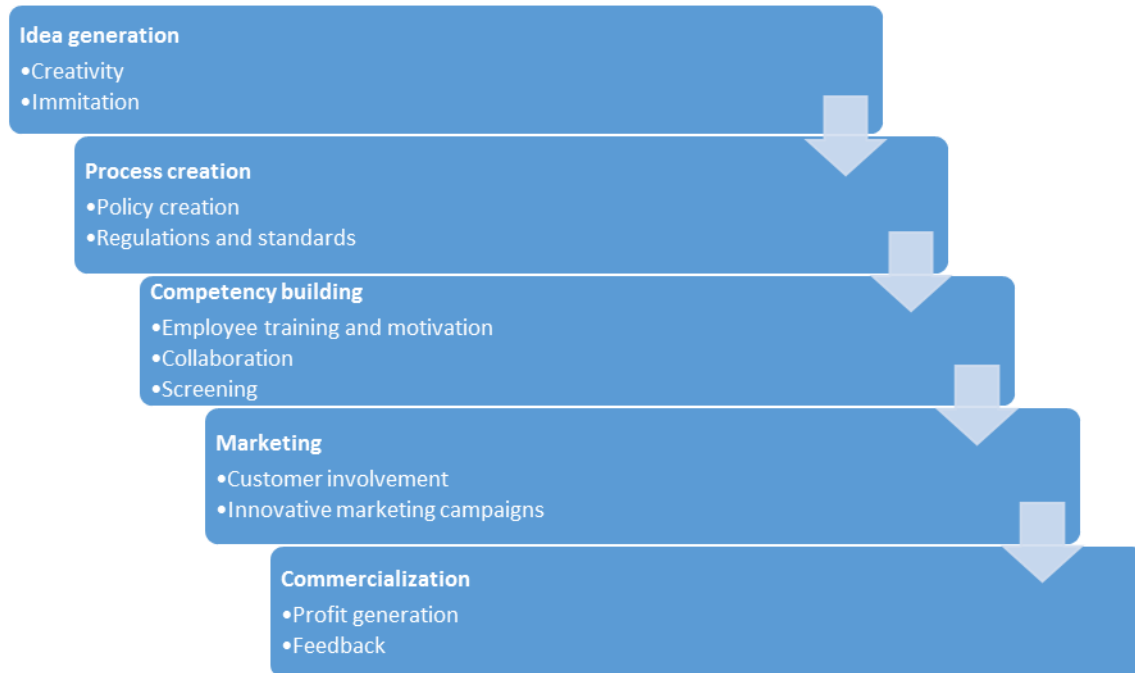


Figure 5. The process of innovation commercialization in Lithuanian fast food companies.

Source: prepared by authors, according to experts' answers.

It is obvious that this framework is simpler, than the one summarizing the scientific literature analysis results. This is due to several reasons. Respondents lack the knowledge and do not have a clear understanding about innovation commercialization process. There is a lack of information and processes are not developed to their full potential. Respondents had difficulty expressing how their innovations generate profit in a restaurant. Experts mentioned that they 'do everything on their own', use 'trial and error method', 'never thought about it'. The commercialization process is often led by one leader, who is also owner of the restaurant. He/she is responsible for starting the idea generation process or generating ideas on his own; he also creates policies, trains and motivates employees, creates marketing campaigns and collects the feedback. Not having a well-developed innovation commercialization process has many drawbacks –knowledge sharing and diffusion is not promoted, which leads to an absence of innovative internal company culture; companies loose opportunities to maximize profits from innovations and to dominate in the market.

Figure 6 summarises activities in sampled fast food restaurants, which are executed correctly, according to the commercialization literature and those, which are completed incorrectly and should be improved.

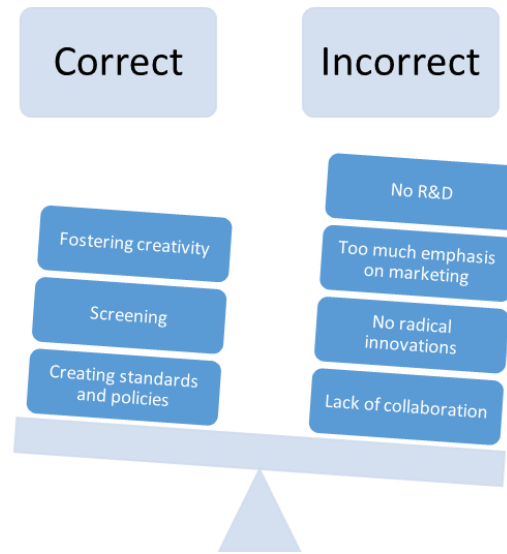


Figure 6. Commercialization process' pros and cons.

Source: prepared by paper authors, according to experts' answers.

In order to improve their commercialization process, companies should start investing in research and development activities, which would help to improve products and preparation processes. It would also help to make innovations more radical, to gain competitive advantage for a company. Concentrating more on the development stage rather than only on marketing would improve the quality and efficiency of the innovation process. Companies should also consider collaborating with other entities in order to develop innovations and improve technology, rather than performing all operations by themselves. All these incongruities slow down the process of innovation commercialization process and prevent companies from earning higher profits.

Interviews were also conducted to find out how experts evaluate the importance of innovation in restaurant selection criteria groups. They were asked to select a number on scale from 1 to 10 (1 meaning - not important and 10 - very important). The Results are summarized in the figure 7.

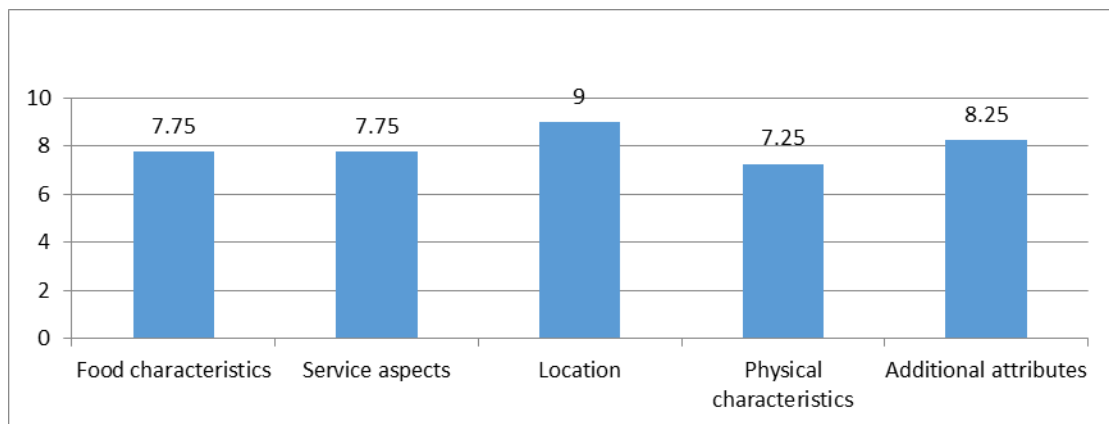


Figure 7. Means of restaurant selection criteria groups.

Source: prepared by paper, according to experts' answers.

From the figure above it can be stated that location and innovating in this area is the most important for fast food restaurants (mean – 9). Additional attributes, such as brand image, discounts, internet connection and etc., were evaluated as the second most important thing (mean – 8,25). Inventing in food characteristics and service aspects are equally important to experts – their mean reads 7,75, and physical characteristics, such as interior, modernity, free space and etc., were least important to experts (mean 7,25). These results emphasize the value of location for fast food restaurant owners and their relatively indulgent opinions towards food and service aspects. A further customer behaviour analysis should be conducted to reveal the importance of these factors to consumers, which should help to make necessary conclusions and provide recommendations for restaurant owners.

Conclusions and recommendations

This paper examined the innovation commercialization process from a business perspective with the emphasis on service innovation and its commercialization. Relying on research results, a new fast food market entrant should be able:

- to understand basic concepts and types of innovation that were overviewed in this paper
- to use the theoretical framework of innovation commercialization process
- to get familiar with the Lithuanian fast food market and innovations that are implemented
- to learn about innovation commercialization process in international and Lithuanian fast food companies
- to acknowledge main incongruities that occur in this process.

Companies should carry out regular marketing research, since one of the main sources of innovation in the commercialization process is a customer.

Main types of commercialized innovations among fast food restaurants are service and process innovations, followed by product innovations, which are not highly related to technological innovations. The research showed that an innovative fast food restaurant is more attractive to customers, so companies have to seek new ways to innovate and improve their innovation commercialization process, which currently remains undeveloped. In order to improve the commercialization process, companies should start investing in research and development activities, which would help to improve products and preparation processes; it would also help to make innovations more radical in order to gain a competitive advantage.

Focusing more on the developmental stage would improve the quality and efficiency of innovation process. Companies should also consider collaborating with other entities in order to develop innovations and to improve the technology rather than performing all operations by themselves. Among the questioned experts “Subway” had the best-developed service commercialization process, which involved the creation of a creative environment, innovative processes and innovation screening.

The Lithuanian market is highly suitable for well-known franchise-based brands and it is easy to enter the market by using this method. However, the further research is necessary to analyze the commercialization process among Lithuanian fast food companies more extensively and enhance the understanding about the relationship between internal and external service innovation commercialization aspects.

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