

Case Study

A Model for Commercialization Strategies Success in Marketing in Iran: A Case Study of Industrial Companies in Tehran

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Abstract

Commercialization strategy is one of the most crucial decisions a firm makes in terms of its ability to profit from technologies developed within the firm. This study was carried out to propose a model for commercialization strategies success in marketing in Iran. This study was a descriptive survey and the survey instrument was a researcher-made questionnaire. Statistical society was all of managers in industrial companies of Tehran. Statistical society was all of managers in industrial companies of Tehran. Sample size (245 persons) determination is based on the Krejcie & Morgan table and cluster random sampling method was used. After data collection, data analysis was performed using Statistical Package for the Social Sciences (SPSS). Reliability of research tool was calculated by Cronbach's alpha and the value of that was 0.81. Results and finding of this research showed that government policy, Legal restrictions and Organizational difficulties affect commercialization strategies success in marketing in Iran.

Keywords: Commercialization Strategies, Industrial Companies of Tehran, Iran.

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Introduction

Start-up innovators who generate a new technology – a truly new “idea” – face a stark strategic choice about how to bring this product to the consumer. On the one hand, developing a value chain from scratch allows the innovator to enter the product market and compete directly with more established players. Alternatively, strategic cooperation with more established players – whether through licensing, an alliance or partnership, or perhaps even outright acquisition – allows the innovation to be directly integrated into an already functioning value chain but eliminates the possibility of displacing the established value chain through innovation (Ziedonis, 2004).

Commercialization strategy is thus one of the most crucial decisions a firm makes in terms of its ability to profit from technologies developed within the firm. Effective commercialization strategy results from careful analysis of the commercialization environment, weighing the benefits and costs of alternative strategies for securing profits and competitive advantage through innovation (Viterbi, 2012).

For most start-up innovators, the commercialization environment includes two elements crucial to the choice of commercialization strategy (Utterback and Abernathy, 2017). First, the firm evaluates the relative cost and profitability of pioneering a new value chain compared to leveraging an established value chain. Second, the innovator assesses its ability to control the fundamental knowledge after the established firm becomes aware of the new technology (Slater and Mohr, 2016). Together, these factors determine the potential for advantage under a cooperative or competitive strategy, shaping optimal commercialization strategy.

An effective commercialization strategy accounts for the interaction between these two key dimensions of the commercialization environment – the level of control over complementary assets and the knowledge embedded in the innovation.

Literature review

Commercialization strategy

Commercialization is the process of bringing a matured concept to the market, in order to make it a commercial success. The traditional view on commercialization divided the NPD process in three steps: Research, development and commercialization. Commercialization was seen as an after launch practice (Mu and Di Benedetto, 2011). The difficulty with this perspective on commercialization is that innovations, projects after the launch, had no connection with the market. Innovations have a remarkable failure rate of 40–50%, and this performance has not changed much over the past 20 years (Meskendahl, 2020).

The research of Frankel (2015) draws states that commercialization can be divided into two classes of variables, namely the strategic decisions and tactical decisions. Strategic decisions are taken prior to the launch of the innovation and consist of the overarching innovation strategy, strategic orientations that have been discussed in the previous paragraph and strategic decisions that focus on the portfolio, positioning in the market

and inter-firm relationships (Fosfuri, 2016). The tactical decisions encompass the key elements of the marketing mix, and are thus concerned with the innovation's launch and after launch commercialization (Eisenhardt and Martin, 2020). Both articles had a project point of view for their research, where this research has a portfolio point of view. Mu and Di Benedetto (2011) already developed measures for business level strategic orientations and drivers for innovation. In addition the other commercialization decisions have to be lifted to a portfolio level. The strategic commercialization decisions and their corresponding variables are shown in table 1. This paragraph will describe the strategic decisions for commercialization and the link with project portfolio management and will finalize with a conclusion on commercialization (Egan, 2020).

Table 1. Strategic commercialization decisions and their corresponding variables

Strategic commercialization variables	Main articles
Business Strategy	
Innovation strategy Strategic orientations & Drivers for innovation	Eisenhardt and Martin (2020) Fosfuri (2016) Frankel (2015)
Portfolio strategy	
Future product generations Relative portfolio newness Resource commitment	Slater and Mohr (2016) Utterback and Abernathy (2017) Viterbi (2012) Ziedonis (2004)
Market strategy	
Target market Positioning on product lifecycle Customer involvement	Belderbos, et al. (2010). Chesbrough, et al. (2016) Choi (2012) Cockburn, et al. (2010)
Inter-firm collaboration	
Network relations and cooperation Technology management	Slater and Mohr (2016) Utterback and Abernathy (2017)

Portfolio strategy

The product strategy is defined by three variables, namely the product innovativeness, the relative product newness and the cycle time (Cohen and Levinthal, 2015). This research will take a look at the portfolio strategy, the composition of the portfolio in terms of innovativeness, newness and resource commitment.

Market strategy

For the commercialization of a matured concept an organization needs to have access to the necessary complementary assets (Cockburn, et al., 2010). The complementary assets consist of technical know how that can be codified or tacit. Examples of complementary assets are knowledge of a certain technology (intellectual property), basic research and technology proficiency, applied research proficiency, competitive manufacturing, marketing proficiency, brand name reputation etc. The organization's

share of the value created will be smaller if the innovation is less heterogeneous due to imitation, or when others control specialized complementary assets (Choi, 2012).

The choice how to bring together the complementary assets depends on the speed of imitation in the market, the importance of first mover advantages, and the transaction costs of the complementary assets (Chesbrough, et al., 2016). The organization can integrate the complementary assets to become a fully integrated innovator that possesses all complementary assets for an in-house NPD process. This is the traditional research and development approach, or the closed innovation model. The advantage of being a fully integrated innovator is that the organization is in full control of the NPD process. In addition, by integration, the organization reduces the chance of imitation of their new concepts. Important disadvantages are that integration is a very time and effort consuming process and it restricts the organization to its own innovation capabilities (Belderbos, et al. 2010).

Strategic decisions for commercialization are made by defining the innovation strategy and strategic orientations, and within project portfolio management by deciding on the portfolio strategy, market strategy and inter-firm relationships. Commercialization requires access to the necessary complementary assets. This can be done through integration, collaboration with network partners or through licensing contracts. The choice for a certain commercialization strategy depends on the speed of imitation in the market, the importance of first mover advantages, and the transaction costs of the complementary assets. Organizations should proactively search for network partners to create a diverse network (Bhide, 2010).

Commercialization strategies that reflect diversity

Criteria and categories of differentiation

Table 2: Criteria for the classification and characterization of commercialization

Criteria	Level
Producer organization	Not organized Informally organized Organized and formally established
Differentiation of products being commercialized	<ul style="list-style-type: none"> • Not differentiated, with no added value • Differentiated but not certified • Differentiated, with certification
Distance between producer and end-consumer	<ul style="list-style-type: none"> • Short (maximum 1 intermediary) • Long (2 or more intermediaries)
Social proximity	<ul style="list-style-type: none"> • Distant • Close
Type of agreement and degree of formality	<ul style="list-style-type: none"> • Informal, with informal agreements • Formal, with informal agreements • Formal, with formal agreements

In the understanding that there is a great diversity of commercialization strategies and ways to characterize them, and without attempting to be exhaustive, Table below defines criteria that can be used to identify common elements for purposes of classification:

Producer organization. Level of organization makes it possible to classify producers as unorganized or organized, either informally or formally. Product differentiation. Level of differentiation makes it possible to classify products according to their value added, as: undifferentiated; fresh or processed with little value added (generic); and differentiated by special attributes valued by consumers and for which they are willing to pay a “premium” relative to generic products (Bhattacharya, et al., 2018). There are two categories within this group: those that do not have third-party certification and those that Distance between producer and end-consumer (number of intermediaries involved in commercialization).

This criterion distinguishes two degrees of distance: short, with no more than one intermediary; and long, with two or more intermediaries. Social proximity (trust built between producers and end-consumers). Relations are classified as close, when contact, trust, affinity, and sensitivity are experienced; or distant, when no relationship exists between the producer and the end-consumer (Arora and Nandkumar, 2012).

Type of agreement and level of formality in the relationship between producers and buyers (are agreements resulting from negotiations made between the parties before transactions take place?). Relations can be classified as: no prior agreement and with prior agreement, and are further distinguished as informal agreements, which are not legally binding, and formal agreements, which are.

The business strategy

Business strategy describes the way in which a firm decides to compete in the market compared to its competitors (Arora and Gambardella, 2010). The part of the business strategy that focuses the project portfolio is mostly referred to as innovation strategy or growth strategy. These strategies reflect an organization’s innovation posture, or innovative DNA (Aghion, 2014). With regards to commercialization and launch decisions, Aghion and Tirole (2014) defined the innovation strategy, the strategic orientations and drivers for innovation as the first important commercialization decisions on business strategy level. The innovation strategy and strategic orientation of the company give shape to the project portfolio composition through project portfolio management. This paragraph will continue on the variations in strategy.

Strategic orientations

According to Mu and Di Benedetto (2011) firm’s successful commercialization of new products hinges upon the development of critical yet complementary sets of strategic orientations. Based on their extensive literature review they identified five strategic orientations. These orientations are the technological-, customer-, competitor-, entrepreneurial- and networking orientation. In their research, Mu and Di Benedetto (2011) combined the customer orientation and competitor orientation into one market orientation. Because a customer orientation indicates a proactive approach and a

competitor orientation a reactive approach, this research will keep these orientations apart. In addition, Mu and Di Benedetto (2011) neglected the innovation strategies in their research and by that the innovative DNA of the organizations. This is a weak point in their research and an important gap for this research to close.

The strategic orientations are defined as follows:

1. A firm's technology orientation indicates the use of sophisticated technologies in new product development, the rapidity of integration of new technologies, and proactively developing new technologies and creating new product concepts.
2. The customer orientation refers to the extent to which a firm's business strategy is sufficiently oriented to its target customers' expressed and latent needs so as to continuously create superior value for them by providing products that fit their needs best.
3. The competitor orientation indicates the extent to which a firm's business strategy is oriented to competitor strategies and activities in order to match or exceed competitive competences.
4. The entrepreneurial orientation reflects the degree to which a firm's business strategy is oriented to the pursuit of new market opportunities and to the renewal of existing areas of operation through the introduction of innovations.
5. The networking orientation indicates the extent to which a firm's business strategy stresses effective and efficient location of network partners, management of network relationships, and improvement of network performance. The networking orientation is an important tool for firms to attain critical resources and knowledge for new product commercialization.

Methodology

The present study is a descriptive one. Theoretical bases of the study were collected by reputable sites, books and related articles. The information and data for hypothesis testing were gathered by a researcher-made questionnaire. Statistical society was all of managers in industrial companies of Tehran. Sample size (245 persons) determination is based on the Krejcie and Morgan table and cluster random sampling method was used. In this study, Validity and reliability of the questionnaire was approved. Validity of the questionnaire was accepted by expert opinion of university and reliability of that was calculated by Cronbach's alpha and the value of that was 0.81.

Before completing the questionnaire by the participants, basic description of the study and its objectives as well as additional details about the questions presented to them. Enough time to complete the questionnaire was provided to participants. Write the name and characteristics of participants for the questionnaire was not compulsory, so they can fully express their opinions. After gathering information from the questionnaires, the data were analyzed and results are discussed with the findings of previous studies. All of data were analyzed by SPSS software.

Results

Table 1 shows descriptive statistics of participants. As showed by the table, males with 53.5% participants are the highest sex of them. Bachelor participants with 35.5% make the most and participants with job experience Higher than 20 years are highest in the group of job experience.

Table 1: Descriptive statistics of participants

Statistics						
Sex	Female			Male		
	114	46.5%	131	53.5%		
Education	Diploma		Bachelor		Masters or higher	
	33	13.5%	87	35.5%	65	28.5%
Job Experience	Less than 10 years		Between 11-20 years		Higher than 20 years	
	51	20.8%	124	50.6%	125	51%
Age	30-30 years		36-45 years		Higher than 40 years	
	46	18.7%	94	38.4%	105	42.9%

Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely government policy, affect commercialization strategies success in marketing in Iran.

Table 2: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound
Government policy	3.45	2.02	0.322	0.315	0.133	0.212

Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely Legal restrictions affect commercialization strategies success in marketing in Iran.

Table 3: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound
Legal restrictions	3.87	1.21	2.45	0.001	0.105	0.158

Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely Organizational difficulties affect commercialization strategies success in marketing in Iran.

Table 4: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound
Organizational difficulties	3.95	2.02	3.87	0.001	0.101	0.187

Discussion

As shown by the results, government policy, Legal restrictions and Organizational difficulties affect commercialization strategies success in marketing in Iran. Consider the costs associated with effective new product introduction. To commercialize successfully, the innovator must acquire or access the manufacturing, distribution, and technology capabilities necessary to deliver value from the innovation to customers. These complementary assets are costly – many times the cost of the initial R&D associated with the innovation. In most cases, developing these capabilities requires a higher cost than integrating the new technology into an established value chain. For example, most biotechnology companies can expedite later-stage clinical trials by cooperating with firms experienced in managing the regulatory process. Even more saliently, traditional pharmaceutical companies can market new drugs through sophisticated distribution networks, often at a fraction of the cost that a biotechnology firm would face developing these capabilities from scratch.

As well, many pharmaceutical firms hold some excess capacity in their capabilities for regulatory approval and distribution. While some biotechnology firms have developed these capabilities to a limited degree, recent consolidation among pharmaceutical firms has reinforced these traditional strengths; the average biotechnology start-up faces an even greater disadvantage in commercialization today compared to a decade ago.

The second crucial aspect to the commercialization environment facing a start-up innovator is the degree of appropriability, the ability to control the knowledge underlying an innovation after more established firms recognize its potential impact on the market. In the absence of effective intellectual property protection, start-up innovators face potential expropriation by market leaders. Established firms may imitate the new technology without sharing their profits with the initial innovator. Box A discusses the challenges to avoiding the expropriation hazard in most high-technology environments.

When expropriation is possible, negotiations to pursue cooperation by the start-up are particularly hazardous. Reaching an agreement usually requires detailed disclosure of technical information. This knowledge helps the established firm develop its own version of the new technology. The “due diligence” in most licensing or strategic alliance agreements prevents the start-up innovator from maintaining its core knowledge assets as

a secret. In most cases, formal intellectual property – such as a well-defined patent or copyrighted source code – is the most effective mechanism to overcome the hazards associated with expropriation, particularly in the context of contracting negotiations.

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