Designing a successful launch process model for innovative fast moving consumer goods (FMCG) in the dairy industries of Iran: A mathematical approach

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Abstract

The purpose of this research is to design a Successful Launch Process Model for Innovative Fast Moving Consumer Goods (FMCG) in the Dairy Industries of Iran. The statistical population, a group of esteemed experts in producing innovative products in the dairy industry, was carefully selected. Using the purposeful sampling approach, ten individuals, each with unique insights and experiences, were chosen as participants in the research. The data was collected using a semi-structured interview method. To ensure the reliability and validity of the data, two methods of reviewing the participants and reviewing the experts who were not participating in the research were employed. The reliability of the model was evaluated using the Kappa index. The value of the kappa index equal to 0.639 was calculated and placed at the level of a valid agreement. Interviews and coding were analysed using Maxqda software. Finally, based on the identified final criteria, the model derived from the Grounded theory analysis method is presented. The results of the open coding of the qualitative data collected using the interview tool show that 95 open codes have been identified out of 459 parts of the interviews. Ninety-five primary codes are grouped into 28 main categories. The results showed that the category of environmental factors ranks first with 74 codes, market segmentation strategy ranks second with 41 codes, and marketing mix ranks third with 39 codes. The category of environmental factors was prioritised in terms of the number of repetitions of codes and generality and comprehensiveness among the respondents, which shows the importance of this category.

Keywords: product innovation, consumer products, product launch, dairy industry, FMCG
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1 Introduction

Innovation is a broad concept that should not be limited to product issues: however, in all cases, it can be related to new techniques, new forms of organization, new solutions or even new sources of customer satisfaction.

Innovation is related to newness [15]. The innovation literature provides an extensive and interesting discussion on how innovations are defined and classified according to the degree of innovation they bring to the market. Chimhood [15] emphasizes that incremental innovation develops in a paradigm while radical innovation is revolutionary and shows that innovations are in a continuum from incremental to radical or new for global products [19].

Manufacturers in different industries adapt their strategies in new product development (NPD) in order to incorporate ideas from different stakeholders [41]. In fact, it can be said that we are currently in a period of "open innovation". Interestingly, innovation is considered a necessity for survival, especially in the fast-moving consumer goods (FMCG) industry. The fast-moving consumer goods industry includes food and non-food products that consumers buy at regular intervals and are usually purchased at grocery stores, supermarkets, hypermarkets, etc. Undeniably, new product development is recognized as one of the most relevant activities of marketers in FMCG and is specifically related to the long-term survival of companies. However, this is a risky activity, as many new products do not even make it to their first birthday [19].

Many factors play a role in the success of an innovative product in the market, such as the time the product enters the market, the technological level of the product, and even its research and development costs. However, the high probability of failure of these products makes the production process of innovative products very risky [5]. Among the industries where the provision of innovative products is considered one of the requirements of resilience in a competitive environment, the fast-moving products industry is [57].

Fast consumption products are any kind of commercial products that are produced in high circulation and at low cost and should be sold quickly. The main characteristic of these goods is that they are consumable and the amount of money in circulation for buying and selling these products is significant. In the field of fast-moving consumer goods, being innovative and successfully launching them into the consumer market is very important and vital [7].

In the field of fast-moving consumer goods, there are many innovations. However, studies show that the main problem in this field is the unsuccessful launch of many of these products in the consumer market. Conducting preliminary interviews with several research and development managers and marketing managers of companies producing perishable goods in the dairy industry, it was evident that despite spending a lot of money on research and development and commercialization of innovative perishable products in various companies, unfortunately, a high percentage of this Products cannot take a proper share of the market, and often due to lack of profitability and even loss, they leave the production cycle after a short period of time, and what they leave for the company is the time and financial costs of this unsuccessful process. Marketing experts consider the fast-moving consumer goods industry to be one of the most unfaithful industries in terms of customer loyalty [32]. One of the constant concerns of marketing managers is the successful launch of fast-moving consumer goods. Because considering the level of competition, the variety of similar products in the market, and the fragile loyalty of customers to the brand, it has always been very sensitive and difficult to develop strategies for introducing fast-moving products to the market, how to distribute and price them, promotions and advertisements for such products, etc. It requires a comprehensive and accurate view [38].

In the field of fast-moving consumer goods, there are many innovations; But studies show that the main problem in this field is the unsuccessful launch of many of these products in the consumer market. The dairy industry is one of the industries for the production of fast-consuming products. Conducting preliminary interviews with several research and development managers and marketing managers of companies that produce fast-moving consumer goods in the dairy industry revealed that despite spending a lot of money on research and development and commercialization of innovative fast-moving products in various companies, unfortunately, a high percentage of this Products cannot take a proper share of the market, and often due to lack of profitability and even losses, they leave the production cycle after a short period of time, and what they leave for the company is the time and financial costs of this unsuccessful process.

Despite the existence of many manufacturers of fast-moving consumer products in the country, as well as their numerous problems in the process of launching products to the target markets, so far no comprehensive research has been conducted to model the successful launch process of innovative dairy fast-moving products, and therefore there is an obvious theoretical gap in this field. Therefore, the upcoming research will cover this research gap as much as possible and answer the following main question: "What is the successful launch process model of innovative dairy products?". It is hoped that by providing a comprehensive model, this research can help the senior managers of companies producing fast food products to make the right decisions in the field of launching innovative dairy products and be a kind of guide and guide in this field. One of the industries in which innovative products are of great importance is the food industry, whose products are classified as fast-moving consumer goods. In this research, the dairy industry has been taken into consideration, and carrying out the present research can largely repair the gaps and voids in studies in the field of modelling the successful launch of innovative fast-consuming dairy products in domestic

research and provide a comprehensive model in this field. In addition, researchers in the field of fast-moving consumer goods marketing can also consider the model derived from this research as a base model and try to develop this model by conducting targeted research in order to make a new move in the field of achieving a local and comprehensive model should be formed. In the rest of the article, an overview of the research literature will be presented. In the next part, the research design and data collection are discussed, and after the interpretation of the research findings, conclusions are drawn.

2 Theoretical foundations and research background

The concept of innovation, novelty, success and changes. Demircioglu [18] has evaluated the importance of organizational innovation (organizational innovation) in organizations for processes and outcomes. In particular, Camisón and Villar-López [14] have stated that organizational innovation is an essential source of competitive advantage and innovative organizations are partly in the use of new methods and capabilities in order to create new opportunities and use existing opportunities for business development. are flexible [8].

$$\text{inflation Rate}_{it} = a + \beta_1 ratepR_{it} + \beta_2 COEPS_{it} + \sum_{j=1}^{10} \gamma_{ij} othersignals_{ij\ t} + \varepsilon_{it} \tag{2.1}$$

$$h_t = \alpha_0 + \sum \alpha_t \varepsilon_{t-i}^2 + \sum \beta_t h_{t-i}^2 \tag{2.2}$$

$$i_t = f(i_{t-1}, X_t, \sigma_t) + u_t \tag{2.3}$$

$$LogINV = \alpha + \beta_0 INV_{t-1} + \beta_1 LogGDP_t + \beta_2 LogRL_t + \beta_3 \sigma GI_t + \beta_4 \sigma CPI_t + \beta_5 \sigma OIL_t + \beta_6 \sigma EXCH_t + u_t \tag{2.4}$$

$$CPI = 0.04 + 0.51 AR(1) + 0.31 MA(1)$$
$$t - stat: \qquad\qquad (3.9) \qquad (2.10)$$
$$R^2 = 0.49 \qquad D - W = 1.95 \tag{2.5}$$

$$OIL = -0.02 - 0.72 AR(1) - 0.58 AR(2) - 0.23 AR(3)$$
$$t - stat: \qquad\qquad (-6.82) \qquad (-4.93) \qquad (-2.24)$$
$$R^2 = 0.39 \qquad D - W = 1.99 \tag{2.6}$$

$$\Delta LEXCH = 0.04 - 0.79 AR(1) - 0.90 AR(2) - 0.70 AR(3) - 0.23 AR(4) - 0.21 MA(1) + 0.55 MA(2) + 0.3 MA(3)$$
$$t - stat: \quad (21.8) \quad (-9.16) \quad (11.6) \quad (-3.8) \quad (-9.94) \quad (17.54) \quad (2.64)$$
$$- 0.55 MA(4) + 0.40 MA(5) - 0.28 MA(6) - 0.21 MA(7) + 0.40 MA(8)$$
$$(-17.02) \quad (4.88) \quad (-3.81) \quad (9.32) \quad (6.15)$$
$$R^2 = 0.40 \qquad D - W = 1.96 \tag{2.7}$$

Industrial innovation is a fundamental issue in economic growth and leads to long-term socio-economic development in industrialized countries. According to the calculations made in the 1950s, the main source of productivity growth is due to new products and processes based on the advancement of science and technology, therefore, the growth of physical and human capital has not been very important in the growth of productivity. In other words, empirical research shows that innovation leads to the growth and revival of enterprises. In other words, empirical research shows that innovation leads to the growth and revival of enterprises. Brouwer and Kleinknecht [13] believe that innovation is a very risky and complex process with low success rates and sometimes disastrous. Innovation potentially modifies and disrupts the organizational framework and often occurs in a certain and unpredictable way.

Even though most innovations in the market are incremental, Varadarajan [58] believes that both incremental and radical innovations are equally important. Radical innovations carry more risks because they often require more consumer learning and changes in consumer behaviour [19].

New products provide opportunities for growth and gaining a competitive advantage for organizations, so today, organizations all over the world depend on the tendency to produce and develop new products and apply methods to correctly carry out the new product development process in order to achieve They have found out about this situation.

In today's era, with the advancement of technology, the emergence of science and new production equipment, the increasing competitiveness of organizations and economic enterprises, rapid and fundamental changes in the needs and demands of customers and issues of this kind, the production and development of new products has faced many problems. Therefore, many studies today seek to discover factors to ensure the success of new product development. New products are like a window of opportunities that are opened to organizations, and at the same time, they are associated with significant risk. In fact, new product development is one of the most important, risky and at the same time most difficult activities of organizations. According to the studies that have been done in the field of new products, many experts in this field have considered classifications for the new product. Here the most important and most used in Classification is indicated. New products are products that belong to one of the following five categories [54].

Kottler and Keller [28] define a product as anything that can be offered to the market to satisfy a want or need. Products that are marketed include physical goods, services, experiences, events, people, places, assets, organizations, information, and ideas.

In the Oslo guidelines, the ultimate goal of product innovation is that the company can achieve a competitive advantage by introducing a new product that allows it to increase demand and increase sales price.

Product innovation, according to the Oslo guidelines, means the introduction of a product or service that is new or significantly improved in terms of characteristics with its conscious applications. This innovation includes significant improvements in technical specifications, components and ingredients, associated software, ease of use, or other functional characteristics.

When discussing product innovation, Abernathy and Utterback [2] define the introduction of new or significant new products or services to meet a user or market need as product innovation, the effect of which is something which the customer sees.

Product-related innovation can be introduced in three forms of the development process of a new item, innovations in line with two dimensions: the knowledge of components and the knowledge of the link between components, which they called this knowledge architectural knowledge.

As an example, we can mention the hard disk product. In this example, the incremental innovation is an improvement in magnetic disk capacity and faster rotation speed. A single innovation includes the replacement of hard disk read/write ferrite tips with thin metal tips, and architectural innovation includes waves of hard disk miniaturization, such that early mainframe computers were packed with 14-inch diameter disks, but after a few years the disk industry 8, 25, 5, 3, 1.8 inches, too. An example of fundamental innovation can be considered the transition from magnetic technology to optical or optical technology [20].

The abbreviation FMCG is an abbreviation derived from the word Fast Moving Consumer Good and means fast-moving goods. In business and industries, this term refers to manufactured goods that are used daily and have a short shelf life. These goods include food, hygiene, cosmetics and pharmaceuticals. In the simplest definition, fast-moving goods are considered to be goods that are sold faster and their selling price is relatively low. Beverages, detergents, dietary supplements, and other products sold in pharmacies without a prescription, toys, and food products from many restaurants are examples of non-durable goods. Usually (but not always) the profit margin of the sale of fast-moving consumer goods is not very high compared to other products, and the profit of producers is provided by the high volume of sales.

Today, the emergence of electronic technology and products such as mobile phones, MP3 players, digital cameras, etc., has added new collections to the field of fast-moving consumer goods, sometimes with the same title as FMCG, and sometimes, specifically, under the title of fast-moving electronic goods or It is called FMCE. As mentioned, the most important factor in determining the fast consumption of products is the speed at which they are sold. In marketing, there is a term called Shelf Life, which can be translated to the shelf life of the product. The difference between the shelf life of the product and the shelf life of the product is quite clear. As the name suggests, the shelf life of a newspaper is one day. Its usage life is half an hour or one hour, But its life as a product may be two or more days. Many customers do not throw away newspapers immediately after purchase. Rather, it stays on their home or work desk for a few days and others look at it. Naturally, the short shelf life of the product, the rapid circulation of the product in the warehouse, less mental involvement of the customer with the product during purchase, wide distribution networks and the high number of times the need to purchase the product are among the characteristics and consequences of the fast consumption of a product.

Consumer goods are mass products for everyday use, including food, beverages, personal care products, household products, and household appliances [37]. These include food and non-food products such as personal care and cos-

metics, detergents and cleaning products. The FMCG industry is characterized by high sales volume as well as low prices [29]. Consumer goods have a short shelf life and are usually designed for single or limited use and disposal. Furthermore, these products easily and temporarily satisfy customer needs before residual materials enter the linear resource stream at the end of their life [12].

The FMCG industry is characterized by multinational companies that sell packaged goods with a brand portfolio in high volume and at low prices, usually in large supermarket chains [3]. In addition, a large heterogeneous network of small and medium-sized enterprises (SMEs) operates in value chains. However, consumer trends of FMCG products are towards niches and online shopping, stimulated by new forms of work and life [12].

In general, the innovation acceptance process has five stages: 1) Awareness: the consumer is aware of the innovation but has a lack of information. 2) Interest: the consumer is encouraged to search for information about the innovation. 3) Evaluation: Does the consumer consider whether to try the innovation? 4) Testing: The consumer has used the innovation to improve his evaluation of its values. 5) Acceptance: the consumer decides to use it completely and continuously [44]. According to the conducted research, the variables affecting the acceptance of innovative products can be summarized according to table 1.

Table 1: Factors affecting the adoption of innovative products from the point of view of different researchers

Variable	Source
Ability to test innovation / trial use	[44, 47, 55]
Compatibility and adaptability	[55]
Ease of use	
Observability	[9]
Complexity	[55]
Types of risk	[27]
Use of new technology	[49]
Partnership and communication with customers	[35]
Partnering with suppliers and distributors	[35]
Transferring the shopping and consumption experience to others	[43]
Innovation adoption cost	[42]
Cultural factors	[56]
Market preview	[23]
Market potential	[23]
Clear definition of the new product	[48]
Consumer perception of innovative product	[42]
Innovative product introduction program	[23]
Shopping pleasure	[27]
Inner sense satisfaction	[27]
Brand	[46]
Institutions, organizations and laws	
Innovative product introduction and supply strategy	[6]
Innovative product target market	[31]
New product development time	[50]
Creating an innovation team in the organization	[55]
Innovative product commercialization strategy	[21]
Innovative product supply environment	[1]
Market leadership of innovative products	[56]
Acceptance of the level of innovation of the new product by the customer	[56]
Individual factors	[56]
Trust in innovation	[40]
Psychological factors	[42]
Networking with customers and suppliers in the production and supply of innovation	[21]
Communication channel with the consumer	[44]
Consumer need for innovative product	[55]
Packing	[21]
Notices	[43]
Resistance to innovation	[33]
The relative advantage of the innovation over previous or competing products	[55]
Environmental conditions	[55]
Organizational factors	[31]
The technology used and matching the needs in the innovative product	[1, 31]
Strategy	[25]
Product factors and features	[27]

The identification of success factors in new product development in the form of business strategies has prompted researchers to conduct extensive research in this field, the research related to the investigation of factors affecting the

success of new product development shows different results. Cooper believes that the key success factors in the new product development process in terms of market and product are as follows:

- Proper orientation in the market, centered on the product and the customer.

- Focusing on providing a world-class product, having an international orientation in the design, development and marketing processes.

Lin et al.'s [30] model of the determinants of new product development success consists of eleven indicators including having a structured process, clear and transparent vision, reviewing the product after launching it to target markets, long-term vision, optimizing the skills of product development teams, understanding the market and Its dynamics were shaped by the support of senior management, the application of experiences gained from previous projects, the provision and provision of the right team, and the retention of team members with experience related to the product development project. Also, the benchmarking studies of the Aberdeen Group of world-class manufacturing companies show that most of the companies studied in the production and development of new products were not able to continuously meet the five objectives of new product production, including the expected income from the new product, production cost, The time to bring the product to the market, the desired quality goals and the cost goals of product development. In another study conducted by Sun and Wing [52] in the context of the Hang Gang toy industry, out of 54 initial success factors, eight factors were stated as the main success factors. These factors are during the 4 stages of new product development and include the precise definition of the target market (formation of the initial idea and conceptual plan), the application of quality standards, clear project goals and the consideration of important issues in the early stages, in the tail stage (product definition and specification determination), internal communication in the project team, timely delivery of the product to the customer, timely launch, product production cost, in the fourth stage (product commercialization). The study of NPD projects in the biochemical industries of several advanced countries showed that: 1) the use of multi-functional teams as well as focusing on dedicated teams, 2) the use of market research, 3) the initial market test of product production and also the examination of final customers, 4) The quality of advertising, 5, the degree or extent to which the company is present in international markets, can be considered as effective factors in the success of NPD projects [24].

In another research conducted by Kandemir et al., [24], the essential factors of success are divided into human resources, development resources, evaluation resources, and startup resources. Also, the findings show that the most important factors for product success include: 1) product advantages; 2) product definition and expertise required before development; 3) technological synergy and 4) marketing. The investigation of the key success factors in new product development in China shows that technological, marketing, managerial and commercialization factors are effective in the success of new product development. In this regard, Mirfakhreldini et al. [34], in the study of customer participation in new product development, showed that the relationship between customer participation and product development is positive and significant through the mediating variable of new product performance. Also, the effect of customer participation on new product development has been reported to be positive and significant. Nikfarjam and Abdulvand [39] in modelling brand value for fast-moving consumer goods, using the dynamic systems approach, showed that it creates a new source of information that can inform academics and managers alike about the dynamic applications of their brand management. Finally, in this research, a model that can be easily implemented has been created, which can simulate continuous scenarios through the causal relationships of the variables that explain the special value of the brand. Mohammadian et al. [36], in identifying the social responsibility requirements of fast-moving consumer goods producers in the field of marketing, showed 18 factors as social responsibility requirements in companies producing fast-moving consumer goods with a marketing approach. These indicators with different influencing powers lead companies to apply social responsibility policies and identify the beneficiaries of the company's social responsibility policies, including primary and secondary stakeholders. Sabry Shaaban and Awni [45], in the study of the key success factors for comprehensive productive production in FMCG companies, showed that factors such as transparency in dealing with shareholders, regular and targeted meetings of the company's management team, and the implementation of an inclusive quality management system, can contribute to the productivity and success of companies. FMCG become effective. Paluch and Wünderlich [42] in their study regarding the risk of innovation in technology-based services found that consumer perception and the costs of adopting an innovation, along with psychological factors, are the most effective factors in adopting an innovation, so financial risks and psychological fear prevent its use. They know about innovation. Manders et al. [32], in examining the flexibility of the supply chain in a fast food supply chain, showed that the flexibility of the fast food supply chain can have significant effects on the success of these products in the competitive market. Binuyo et al. [11] in the investigation of innovative strategies and company growth based on evidence from selected FMCG companies in Lagos State, Nigeria showed that innovative strategies had a significant impact on the growth of FMCG companies in Lagos State, Nigeria. Bashir et al. [10] in a review of sustainable business

models in fast-moving consumer goods showed how business experiments for sustainability can reveal practical insights for business model innovation, related to (1) systematic barriers that need to be addressed to stimulate the adoption of solutions; overcome more sustainably, and (2) behavioural interventions that can facilitate green consumption. Aljanabi [4] examines the role of innovation capability in the relationship between marketing capability and new product development in the telecommunications sector. The purpose of this study is to investigate the relationships between marketing capabilities and innovation and new product development (NPD), including the potential mediating and moderating role of innovation capability (IC) in the relationship between marketing capability (MC) and NPD. The purpose of this study is to investigate the relationships between marketing capabilities and innovation and new product development (NPD), including the potential mediating and moderating role of innovation capability (IC) in the relationship between marketing capability (MC) and NPD. Data were collected from telecommunications companies operating in the Kurdistan region of Iraq using a self-administered questionnaire. Out of 556 distributed questionnaires, 272 questionnaires were returned and used for statistical analysis. To analyze the data, a structural equation model (SEM) was constructed to test both measurement and construct models. Both innovation capability and marketing capability positively affect NPD. Moreover, IC not only strengthens the relationship between MC and NPD but also acts as a mechanism that enables this relationship. Sundström and Hjelm-Lidholm [53] in their review of repositioning customer loyalty in the FMCG market show that many companies face the exact challenge of high employee turnover as it is associated with recruitment and training costs, suggesting that customer loyalty is an issue. The client organization becomes an external human resource. A practical contribution to the conceptual model is to propose learning from experiences of successful employee recruitment and employee motivation when observing and working with customer loyalty. Bocken et al. [12] in the review of circular business models for the fast-moving consumer goods industry in terms of desirability, feasibility and durability, five success factors were identified: brand and retailer participation, consumer participation, operation efficiency, profitability of the business model, and creating an ecosystem. The main motivation for consumers to participate in the circular business model is the potential positive environmental impact, although there were concerns about the added environmental impact associated with logistics in the e-commerce model. In addition, convenience And access to the reuse model is important to consumers. Costs are identified as a dominant barrier for companies to engage in reusability. Jackson et al. [22] in a review of simultaneous supply chains for fast-moving consumer goods showed that incorporating synchronization in the export supply chain can reduce the overall cost by 9% and increase flexibility by allowing different modes of transportation. Khalid [26] in examining the change of marketing paradigm from 1.0 to 5.0, with special reference to marketing changes in the FMCG sector, the results of this study helped marketers understand changes in marketing and also identify current trends that positively and effectively help brands. slow It also sheds light on the impact of CSR activities on brand image.

3 Research methodology

This research aims to design a process model for the successful launch of innovative consumer products. From the point of view of experts, including senior managers of companies that produce dairy products and marketing consultants of dairy products, sellers (wholesalers and retailers) and consumers of dairy products, were considered as the statistical population. Expertise index in this research, a person's complete expertise in the field of marketing, sales and branding of consumer products, used in the end, leads to the extraction and identification of variables. These experts should have the expertise, experience and related field of activity.

As mentioned, this research is a qualitative type of research and data analysis of the foundation was used to conduct it.

Therefore, according to the importance of the subject, it was necessary to interview experts who, while having multiple specialities, have complete knowledge of the basics. Therefore, in the current research, people who previously or currently, while having experience in their work, were also specialized in other fields and were employed were included in the statistical population. Then, with the progress of the research and data collection and analysis, interviews were conducted with other experts to better understand the concepts and categories. Thus, in 2021, an interview was conducted with 10 experts. Sampling in qualitative research is usually done purposefully using non-probability methods and continues until theoretical saturation. Most of the qualitative research is done using interview tools and from the perspective of experts. The number of samples is usually very limited and the criterion for the end of sampling is theoretical saturation. Danaei Fard et al. in the book of qualitative research methodology in management believe that a sample of 5 to 25 people is enough for qualitative studies [17]. The number of experts is considered to be 10 because, for qualitative methods, interviews with 5 to 25 experts are sufficient. Thus, in 2021, an interview was conducted with 10 experts. Theoretical sampling is one of the methods suitable for grounded theory. In this method, after interviewing each expert, the researcher analyzes and codes the data and at the end identifies clues for the next interview. This process continues until theoretical sufficiency is achieved. There is no exact method to

calculate sample size in qualitative methods. The main goal is to choose an experienced sample that properly covers the research needs. The number of samples in qualitative research is small because even several more than ten people provides a large amount of information to the researcher, which makes content analysis and perception of views very difficult. The increase in the sample volume brings with it the sampling error and large and unavoidable distortions.

In practice, after conducting each interview, the text of the interview is analyzed in detail to infer and extract concepts from each sentence. After that, the next interview was conducted. In this way, this process continued until the research reached the theoretical saturation stage. Theoretical saturation means that recent interviews do not result in any new data and are all repetitions of previous data [51]. Therefore, from the sixth interview onwards, there was no new data in the conducted interviews, and in the tenth interview, a reasonable assurance of theoretical saturation was achieved. It is worth mentioning that most of the interviewees had more than 15 years of professional experience in their field of work, and those who had a doctorate degree or were studying for a doctorate degree. Grounded theory is a systematic and qualitative method to create a theory that can be explained on a broad level, the action or interaction of a subject with a specific identity. According to Strauss and Corbin, the context-based theory is a theory that is directly extracted from the data that has been regularly collected and analyzed during the research. Data collection, analysis and final theory are closely related in this method. Although each of the different research events places different importance on data interpretation, data interpretation is at the heart of qualitative research. In the context-based method, data interpretation plays a central role in the research process.

The most important reasons for choosing this method are as follows:

1. When there are almost few known samples about the field under study;
2. When the researcher understands the perceptions and experiences of the participants in a particular sample;
3. When researchers are interested in challenging existing theories;
4. When there is no underlying theory to explain the fit of specific psychological constructs with the investigated behaviors;
5. When the goal of the researcher is to develop a new theory.

The implementation of ground-based theorizing is generally done in two basic steps as follows:

First step- data collection: The primary data of this research was collected from the source of unstructured interviews with experts and with an exploratory approach using the general questions raised above.

Second step- text coding and theorizing: The data coding process includes three levels: open coding, central coding and selective coding, which are explained below:

Open Coding: During open coding, the data is broken down into separate parts and examined to obtain their similarities and differences. Then these "concepts" are classified based on their similarities, which is called "categorization" and "category" is a concept that is more abstract than other concepts and the foundation of the theory is formed from them. In short, the result of open coding is a set of conceptual categories created from the data.

Axial coding: in axial coding, internal connections are established between the basic categories that are expanded in open coding, at the level of features and dimensions. At the end of this stage, categories are divided into causal conditions, intervening conditions, contextual conditions, strategies and consequences. The main topic in this research is working capital management. In this method, Maxqda software is used for qualitative data analysis and theorizing.

4 Research findings

4.1 Open coding

Strauss and Corbin [51] describe open coding as "a part of analysis that is specifically concerned with naming and categorizing phenomena through careful examination of the data". Documents are classified based on relevance to similar topics.

The result of this step is to distil and summarize the mass of information obtained from interviews and documents into concepts and categories that are similar to these questions. In the theoretical coding method, there are two trends for data analysis. Some researchers analyze each part separately. That is, texts and data are analyzed line by line and word by word. Some also code only the key points and themes due to the time-consuming nature of this method. In this research, the first method was used to answer the research question. It was observed that 95 open codes were identified among 459 parts of the interviews.

4.2 Creating categories (axial coding)

The purpose of this stage of coding was to establish the relationship between the categories produced in the open coding stage. Axial coding led to the creation of groups and categories. All the similar codes were placed in their own group and the created codes were reviewed and compared with the texts so that nothing was missed.

Table 2: Axial coding

Repeat	Open source	category
1	1. Functional applications	
1	2. Media and Internet	1. Value creation
4	3. Electronic marketing	
2	4. Customer satisfaction	
2	5. Customer's wallet	2. Increasing customer satisfaction
2	6. Customer trust	
3	7. Industry cycle in the market	3. Increasing market share
3	8. The company's market share	
2	9. Customer Access	
4	10. Increasing the share of customers' minds	4. Increasing customer loyalty
4	11. Belonging to the customer	
5	12. Company branding	5. Ideation
8	13. Brand performance	
2	14. Social responsibility	6. Improving the image of the company
3	15. Brand image	
2	16. Overall performance of the market	7. Economic analysis of the product
5	17. Product profit share	
2	18. Online research	8. Product testing
4	19. Product testing	
1	20. Advertising campaigns	
10	21. Marketing mix	9. Determining the marketing mix
10	22. Notification	
18	23. Advertising	
1	24. People's needs	10. Diversification and change of attitude and behavior of
3	25. Contribution of consumer behavior	consumers
1	26. Corporate forces	
1	27. Production team	
2	28. Development of competencies	11. Empowering the organization's employees
2	29. Professional teams	
3	30. Skills and training of human forces	
3	31. Increasing employee confidence	
3	32. Market test	
4	33. Price elasticity of the product	12. Product development based on differentiation
7	34. Target market	
11	35. Market segmentation	
2	36. Market noise	13. Need-oriented product development
4	37. Integrated marketing	
5	38. Product diversification	
7	39. New product marketing strategy	14. Creative marketing strategy
8	40. Ability to innovate	
10	41. Product quality	
4	42. Product design	
4	43. Stages of product development	
4	44. Introducing a new product	15. Market segmentation strategy
9	45. Product packaging	
9	46. Organization strategy	
11	47. Product differentiation	
1	48. Purchasing power	
1	49. Market research	
2	50. Market orientation of the organization	16. Positioning strategy based on differentiation
3	51. Knowing the market	
6	52. Location	
3	53. Product supply stores	
6	54. Customer needs	17. Targeting strategy
14	55. Product pricing	
1	56. Growth of the company	18. More profitability
8	57. Profitability of the company	
4	58. Covering needs	19. Customer relationship management system
9	59. Communication between the organization and the customer	

2	60. Necessary knowledge	
2	61. Implementation of knowledge management strategies	20. Knowledge management system
10	62. Research and development	
1	63. Competitive indicators	
1	64. Type of consumer goods	
5	65. Suppliers	21. Competitive terms
7	66. Competitors of the company	
1	67. Obtaining feedback information	
3	68. Marketing team	22. Product design
5	69. Use of benchmark market	
1	70. Technology	
1	71. Activity environment	
2	72. Unions	
2	73. Input factors	
2	74. Lifestyle	
3	75. The price of the exchange rate	
3	76. Income level	23. Environmental factors
4	77. Employment	
5	78. Laws and regulations	
11	79. Political factors	
17	80. Economic factors	
23	81. Socio-cultural	
3	82. Durability in the market	
5	83. Substitute goods	24. Gaining a competitive advantage
3	84. Corporate preparation	
3	85. Product launch	25. Launch of a new fast food product
1	86. Board of directors of the company	
1	87. Financial team	
1	88. Conflict resolution	
2	89. The leader of the organization	26. Organization management
5	90. Organizational culture	
9	91. Resources and information dashboard	
4	92. Market taste	
6	93. Product performance	27. The need for innovation
8	94. Estimation of market demand	
23	95. Marketing research	28. The need for fast food products

The results of axial coding are shown in table number 2. It can be seen that 95 primary codes are categorized in 28 categories.

The core category is the same main phenomenon that this research aims at, that is, the design of the process model for the successful launch of innovative consumer products, which is the basis and axis of the process to which all other main categories are related, and according to the findings of the research, it can be He talked about the effects of this phenomenon and the strategies that came out of it, and then the consequences and results of these strategies.

Table 3: Core category

Category type	category	code opener
	Launch of a new fast food product	Corporate preparation, product launch
	value creation	Applications, media and internet, electronic marketing
	ideation	Company branding, brand performance
The central category	product design	Obtaining feedback information, marketing team, using benchmark market
	Product development based on differentiation	Market testing, product price elasticity, market target
	Need-oriented product development	Market segmentation
	Economic analysis of the product	Market noise, integrated marketing
	Product testing	Overall market performance, product profit share

Causal conditions include cases of categories that directly affect the central phenomenon or are the creators and developers of this phenomenon, which can often be found by regularly looking at the data and reviewing the events, and show the obtained results. The need for innovation, the need for fast consumption products, competitive conditions, can be causal conditions.

Background conditions are generally specific factors that organizations cannot control, but our strategies are affected by that background. In relation to these factors, during the interviews, more emphasis was placed on organization management, empowerment of organization employees, customer relationship management system, and knowledge management system.

Table 4: Causal category

Category type	category	code opener
Causal condition	The need for innovation	Market taste, product performance
	The need for fast consuming products	Market demand estimation, marketing research
	Competitive conditions	Competitive indicators, type of consumer goods, suppliers, competitors of the company

Table 5: Background conditions

Category type	category	code opener
Background conditions	organization management	Company board, finance team, conflict resolution, organizational leader, organizational culture, resources and information dashboard
	Empowering the organization's employees	Corporate forces, production team, development of competences, professional teams, skills and training of human forces, increasing the self-confidence of employees.
	Customer relationship management system	Covering the needs, communication of the organization and the customer
	Knowledge management system	Necessary knowledge, implementation of knowledge management strategies, research and development

Strategies are the actions that are presented in response to the central category or phenomenon, chosen in a purposeful way and by using them, the central phenomenon can be implemented. The strategies that should be considered, it is very important that the interviewees of this research pointed to the determination of marketing mix, creative marketing strategy, targeting strategy, positioning strategy based on differentiation, segmentation strategy more than others.

Table 6: Category of strategies

Category type	category	code opener
Strategies	Determining the marketing mix	Advertising campaigns, marketing mix, information, advertising
	Creative marketing strategy	Product diversification, new product marketing strategy, innovation capability, product quality
	Targeting strategy	Product supply stores, customers' needs, product pricing
	Positioning strategy based on differentiation	Purchasing power, market research, market orientation of the organization, market recognition, positioning
	Segmentation strategy	Product design, product development stages, new product presentation, product packaging, organization strategy, product differentiation

Intervening conditions, which adjust the causal conditions and affect the strategies, during the conducted interviews, the vast majority pointed to the environmental factors, diversity and change in the attitude and behavior of consumers, which shows how these factors are implemented. They facilitate the adopted strategies.

Table 7: Intervention category

Category type	category	code opener
Intervening conditions	Environmental factors	Technology, activity environment, unions, input factors, lifestyle, exchange rate price, income level, employment, laws and regulations, political factors, economic, socio-cultural factors
	Diversity and change in consumer attitudes and behavior	People's needs, the share of consumer behavior

Consequences and results come from the adoption of strategies that, in a successful state, will lead to the realization of the central category. As a result, the interviewees of this research have pointed out the increase in market share, increase in customer loyalty, increase in customer satisfaction, more profitability, gaining competitive advantage, and improving the image of the company.

4.3 Selective coding

In selective coding based on the model of the previous stage, propositions or explanations are provided that connect the model classes to each other or form a story that connects the model classes to each other. In the advanced mode, the researcher finishes the work by presenting the situation matrix [16]. In the field of foundational data theory, it should be noted that the review of the background is neither indicative of major concepts nor presenting hypotheses. Rather, the review of the background indicates the existence of a gap or a kind of bias in the existing knowledge

Table 8: Consequences category

Category type	category	code opener
Consequences	Increase market share	Industry cycle in the market, company's market share
	Increase customer loyalty	Customer access, increasing the share of customers' minds, belonging to customers
	Increase customer satisfaction	Customer satisfaction, customer wallet, customer trust
	More profitability	Company growth, company profitability
	Gaining a competitive advantage	Durability in the market, substitute goods
	Improving the image of the company	Social responsibility, brand image

and thus provides a rationale for the study [16]. For this reason, it is recommended that the researcher put aside his ideas and thoughts as much as possible[16]. Background review has the benefit of providing references to the background while presenting data to provide external support for the theoretical model [16]. Selective coding is the process of theory integration and refinement [51]. At the end, in the selective coding stage, according to the results of the previous coding steps, the main category was selected and connected to other categories in an orderly manner, the connections were validated and the categories that needed further refinement and development, They improved. It should be noted that the above steps are done in a round trip process. Therefore, the steps of selective coding are not clearly separated from each other, and it is done through an interactive process, along with open and axial coding. The experts received the paradigm model and its development process via email. The experts were asked to give their opinions about the process of developing the model and the final model, most of them approved the model, and some of them had corrections, which were applied in a round-trip process, and the final expert opinion was taken. To integrate and present the friendship- oriented leadership model, using the foundation's data theory, after identifying the central category and relating other categories in the form of a systematic paradigm of foundation's data theorization, to refine the designed model and cultivate the main factors of action and model The final result of the research was obtained as follows (Figure 1).
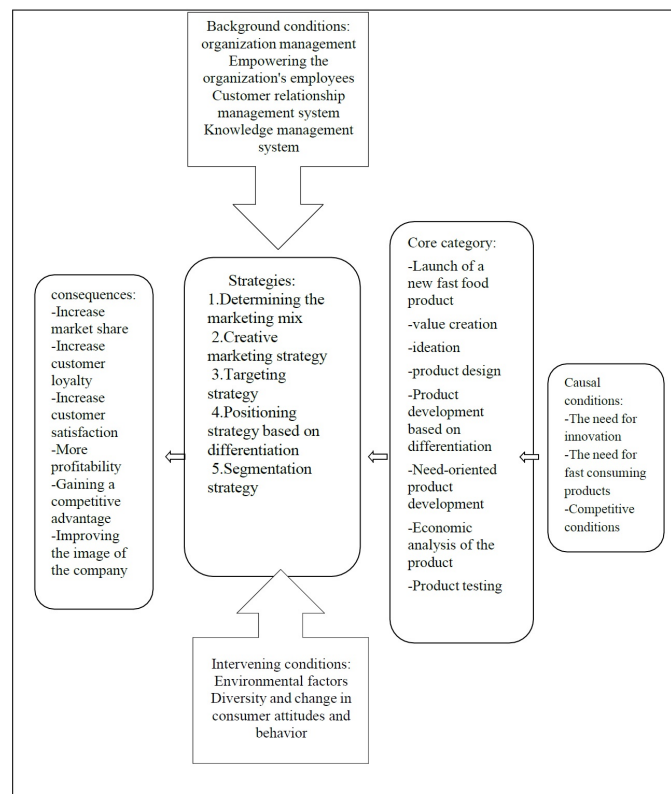

Figure 1: Paradigm model of the process model of the successful launch of innovative consumer products

4.4 Validation of foundation data theory

Although some qualitative researchers consider the discussion about the reliability and validity of data and research results to be traditionally related to quantitative research, but the fact is that in qualitative research, the validity and reliability of data are also and findings are an important part of the research process [51]. Things like the sensitivity of the researcher, the integrity of the methodology, the appropriateness of the sample, the simultaneous collection and analysis of data, ensure the scientific accuracy of qualitative research to a great extent. In the current research, two methods of review of participants and review of non-participating experts in the research (4 members of the university faculty and one finance PhD student) were used and after receiving correction comments and consultation with supervisors and advisors, the necessary editing was done and the model The final was presented.

Kappa index has been used to measure the reliability of the designed model. In this way, another person (one of the elites of this field) has classified the codes into concepts without knowing how to integrate the codes and concepts created by the researcher. Then the concepts provided by the researcher have been compared with the concepts provided by this person. Finally, according to the number of similar concepts and different concepts, the Kappa index has been calculated. As can be seen in Table 9, the researcher has created 28 concepts and another person has created 23 concepts, of which 20 concepts are common.

Table 9: The status of converting codes into concepts by the researcher and another person

		Researcher's opinion		
		yes	**no**	**Total**
	yes	A = 20	B = 3	23
Another person's opinion	no	C = 8	D = 0	8
	Total	28	3	31

Table 10: Kappa index status

Agreement status	The numerical value of the Kappa index
weak	Less than zero
unimportant	Between 0 and 0.2
medium	Between 0.21 and 0.4
Appropriate	Between 0.41 and 0.6
a valid	Between 0.61 and 0.8
Excellent	Between 0.81 and 1

As can be seen, the value of the Kappa index was calculated as 0.639, which according to table 10 is at the level of valid agreement.

5 Discussion and conclusion

In this research, based on interviews with research experts, related models and variables have been identified to investigate the process model design variables for the successful launch of innovative consumer products. Finally, based on the identified final criteria, the model derived from the foundation's data analysis method is presented. The results of the open coding of the qualitative data collected using the interview tool show that 95 open codes have been identified out of 459 parts of the interviews. 95 primary codes are grouped into 28 main categories. The results showed that the category of environmental factors ranks first with 74 codes, market segmentation strategy ranks second with 41 codes, and marketing mix determination ranks third with 39 codes. The category of environmental factors was prioritized in the number of repetitions of codes and also in terms of generality and comprehensiveness among the respondents, which shows the importance of this category.

The product development process has its own complexity. Complexity can be caused by both overlapping and interdependence between activities in a product development process. Expanding and promoting research and development activities requires knowing the effective factors in the process, designing policies and mechanisms for the effectiveness of such activities. Today, more than ever, most organizations have realized that relying on traditional competitive levers such as increasing quality, reducing costs, and differentiation in providing products and services is not enough, and instead, concepts such as speed and flexibility have gained significant expression in competition and the tendency Towards providing new products and services to the market, is the justified reason for this change of attitude. The focus of research in the field of consumer products shows that today, organizational survival depends on the trend towards new products and the use of methods to create them. So that the new product development process is considered a competitive advantage for different types of industries and service organizations. New product

development is a vague and complex process that includes almost all units of an economic enterprise such as marketing, design and engineering, production, etc. When it comes to a new product, a wide range of concepts come to mind, such as a simple consumer product to a very complex new military system. Paying attention to the various dimensions of customers' demands and needs is the main motivation factor for providing and producing new products. It is with the organizations. With the advancement of science and technology in the competitive market, as well as changes in the tastes and desires of consumers, it is not possible to rely only on existing products. All organizations need a new product development plan. The variability of competitive rules in the business world has made the process of presenting a new product to the market important. Based on the findings of the research, the following suggestions are presented:

- Company managers are suggested to use new production and engineering technologies in the process of producing new products

- It is suggested that company managers use market research teams to obtain information and put up-to-date information in accordance with customers' needs at the disposal of innovative consumer products development teams.

- It is suggested that the managers of the company, in the field of acquisition and transfer of new technologies for the production of new products, monitor all aspects well and provide suitable infrastructures for the use of new technology.

- Company managers should, in addition to institutionalizing new technologies in the company, create strong relationships with major customers, companies and suppliers so that they can market new products and services obtained from new technologies.

- The manager of the organization should pay special attention to the management team of the innovative fast-moving consumer goods project, and especially the role of the new product development project manager, and provide the necessary training for this team.

- An appropriate organizational structure should be used to establish appropriate communication between teams involved in new product development projects, in addition to the importance of cross-functional teams (work-groups) and virtual specialized teams, so that they can share their information and knowledge with each other. Implement the received data and training correctly.

- In the new product development process, flexibility in the concept of the new product and the permission to update this achievement should be provided by using the processes of concept management, product under development and change management, and according to these changes, project members with knowledge Up to date, implement other stages of new product development.

- The main and general processes required for successful launch process projects of innovative consumer fast products should be explained in detail and in general, so that the people of the new product development team, according to their ability, talent and learned skills, accompany this team.

- A cost should be allocated for the training of the research and development team for a successful launch process of innovative consumer products, and these costs should be considered as an investment.

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