




Presenting a Paradigmatic Model of Creativity, Innovation, and Entrepreneurship for Sustainable Economic Growth in Business Units (Case Study: Home Appliance Manufacturers)

Bahram. Ajorloei¹, Bita. Tabrizian^{2*}, Saber. Khandan Alamdari²

¹ PhD Student, Department of Management, Roudehen Branch, Islamic Azad University, Roudehen, Iran

² Assistant Professor, Department of Management, Roudehen Branch, Islamic Azad University, Roudehen, Iran

* Corresponding author email address: bt.tabrizian@gmail.com

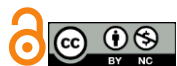
Article Info

Article type:

Original Research

How to cite this article:

Ajorloei, B., Tabrizian, B., & Khandan Alamdari, S. (2024). Presenting a Paradigmatic Model of Creativity, Innovation, and Entrepreneurship for Sustainable Economic Growth in Business Units (Case Study: Home Appliance Manufacturers). *International Journal of Innovation Management and Organizational Behavior*, 4(2), 54-63.
<https://doi.org/10.61838/kman.ijimob.4.2.7>



© 2024 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

Objective: The current research aims to present a paradigmatic model of creativity, innovation, and entrepreneurship towards sustainable economic growth in business units (Case study: Home appliance manufacturers). This study is applied in purpose and descriptive-analytical in nature.

Method: The research method is qualitative. The population of this study includes academic experts and executive managers in the home appliance industry, calculated as 11 individuals through snowball sampling and theoretical saturation point. The data collection tool is semi-structured interviews. The analysis of this part is conducted using grounded theory.

Findings: The qualitative research results propose the desired paradigmatic model, emphasizing the response to the main research question in the form of six main categories and subcategories.

Conclusion: Causal factors including organizational entrepreneurship, development of products based on industry standards and competitive advantage. Contextual factors include government support, developmental infrastructures, and financial support for standardization in entrepreneurship. Intervening factors include the product quality condition for competitiveness, sustainability categories, and attention to labor. Strategies include reforming laws, developing science and technology parks, and accelerating capital turnover. Outcomes include commercial and economic liberalization, development of the innovation and technology ecosystem, and increased productivity. The core category includes technology, ideation, employment generation, and international competition.

Keywords: Creativity, Innovation, Entrepreneurship, Sustainable Economic Growth, Home Appliances

1 Introduction

Sustainable economy seeks to find a balance between production growth and population growth. In fact, a steady or sustainable economy is one that is established to balance growth with the entirety of the environment. This economy aids in the efficient use of natural resources while also seeking the equitable distribution of wealth derived from the development of those resources. In other words, this process not only pays attention to the expansion of production dimensions but also considers the improvement of its quality while respecting the environment. In the sustainable economic growth process, the entire system of social, economic, political, and cultural norms moves from an undesirable and suboptimal state towards a condition of life that is materially and spiritually better, in harmony with the diverse basic needs and desires of individuals and groups within the system (Rodrigues & Franco, 2019).

Social and economic dynamism depends on the flourishing of human potential forces, and all actions that enhance motivations and stimuli for creativity and innovation in humans will determine economic growth. It is reminded that the potential for innovation, creativity, and invention has always existed in humans (Cheraghi et al., 2019). Countries implement planning and policymaking for sustainable economic growth, but perhaps the issue that many policymakers and statesmen overlook in the path of development is related to the concept of "manifestation of creative thought in human capital"; indeed, human capital is considered one of the effective factors in sustainable growth (Luger, 2019), but it is necessary to go beyond this view and assign a special place to humans in the economy (Moridsadat et al., 2017). Amartya Sen says: "Humans should not be considered merely as tools and on par with capital in the path of development, but rather human existence is not only the most important tool for social progress but should also be its deepest goal" (Trillo, 2019). Another important viewpoint that places special emphasis on human creativity and innovations is the Austrian perspective. Mises, one of the main thinkers of this school, says: "Economics is not focused on objects and tangible assets, but on humans, their understanding, and their actions. Goods, products, wealth, and other aspects of conduct are not elements of nature; they are components of human conduct and perception. It is the human aspect of conduct that gives meaning to them, and anyone who wants to study them should not pay attention to the external world but should search for the meaning, concept, and cognition in the actors involved"

(Ghaseminoughabi & bahramzadeh, 2023). Schumpeter also believes that any significant transformation that has been a turning point in human history or has led to discovery and invention, and opened a new chapter for humans, has solely originated from the free human mind and creating conditions for the emergence of individual genius and innovations. Since all humans are equipped with the basic tools required for creativity and entrepreneurship, Guilford argues that creativity is a natural resource and striving for the blossoming of creativity brings immense benefits and profit for the entire society. In other words, if efforts are made to foster and nurture creativity throughout the society, the benefit, which is economic development, will return to the entire society (Stoica et al., 2020).

Innovation can only lead to economic growth in deprived areas if it is market-creating innovation. This means creating a new market. New market implies reaching new customers. These are customers who have needed to use a product or service but have been unable to do so due to high costs, lack of skills, or other reasons, often referred to as non-consumers. If innovation can provide a product that this large group of non-consumers can use, we call this market-creating innovation. Market-creating innovation leads to the phenomenon of entrepreneurship (Jiang et al., 2019). Industrial growth and advancement in a society's economy are based on changing ideas and creating innovations, and without being at the forefront of science and innovation, no country will be successful in quickly navigating the path of growth. Naturally, the most prominent tool that can lead us to this goal is entrepreneurship (Badraghnezad et al., 2022). In an economic system based on entrepreneurship, innovators and idea owners are the main assets of an economic entity and are among the main factors of sustainable growth. Entrepreneurship is closely related to the economic and social growth of countries and is today one of the growth indicators in developing countries. Due to the special role and position of entrepreneurs in the process of progress and economic growth of society, many governments in developed and leading countries try to guide a number of individuals in society who have entrepreneurial characteristics towards entrepreneurship education and entrepreneurial activities with the maximum facilities and utilization of research achievements. Strengthening entrepreneurship and creating a suitable environment for economic growth are tools for the economic advancement of countries, especially developing ones. According to the Global Entrepreneurship Statement, there is a strong correlation between sustainable economic growth and the

level of national and organizational entrepreneurial activity (Pyka et al., 2019). From the Schumpeterian perspective, the entrepreneurship process is one of the key factors in the economic growth of a region or country, and according to Kirzner, in economic growth, the entrepreneur rather than creating opportunities, reacts to them and seeks to profit from opportunities rather than creating them (Krishna, 2019).

In our country, despite efforts made towards entrepreneurial growth, there is no observation of adequate and sustainable growth in the area of entrepreneurship and small and medium-sized businesses in practice. Unfortunately, many entrepreneurs in Iran face obstacles such as changes in government policies and the application of arbitrary policies, an unhealthy business environment, instability of managers and government employers, the existence of inappropriate and unsupportive laws, lack of environmental confidence, absence of commercial infrastructures, lack of social and cultural norms supporting entrepreneurship, unsuitable market conditions, and high interest rates on bank loans, which have created an unfavorable business environment for them (Cheraghi et al., 2019).

The home appliance industry in Iran holds special importance, being the country's second largest industry and has managed to employ 3 million people through direct and indirect jobs. Over 600 manufacturing units in the home appliance industry are active in Iran, which have made this industry famous worldwide. The Iranian home appliance industry has potential capabilities for production and quality enhancement, in addition to standardization in all areas. However, despite all these capabilities, the government, led by the Ministry of Industry, Mine, and Trade, does not seriously support this industry. Among the priorities, the localization of home appliance production should include keeping up with global technology and ensuring products are adapted to the regional climate (Saeedi motlagh & Karimishad, 2022). Despite these, we witness problems and challenges in the home appliance industry. Issues such as the bureaucracy in import procedures and the requirement for registration in various systems for importing parts and raw materials, the necessity for the involvement of private sector associations, identification of deterrent laws and contradictory circulars that disturb the business environment, special and practical support for home appliance exports through restarting the payment of export rewards based on the value added, and the lack of entrepreneurs and investors supporting domestic products to

increase consumer satisfaction are among these problems. Moreover, creating favorable conditions for bank debt approvals of home appliance manufacturing companies and related parts, as well as the necessity to remove and abolish inefficient laws and regulations along with the continuation of raw material supply for production lines, especially imported raw materials, are also part of the industry's challenges. With the stagnation of production in some home appliance factories, if the ban on the import of home appliances to the country is lifted, producers will also have to turn to imports, which could have irreparable consequences for the country. Therefore, in the absence of serious government support for this industry, we must witness the loss of an industry that has localized technical knowledge and is considered the country's second-largest employer (Safardoust et al., 2023; Sahafzadeh & Haghghi, 2023).

Therefore, by identifying the problems of home appliance manufacturing companies on one hand and outlining the valuable position of entrepreneurship in developing countries and its most important features, namely creativity, innovation, and the role it can play in sustainable economic growth, this study strives to present a paradigmatic unit model based on creativity, innovation, and entrepreneurship considering the position of sustainable economic growth in commercial units producing home appliances to address the existing problems. Thus, the aim of this research is to answer the following question:

What is the paradigmatic model of creativity, innovation, and entrepreneurship towards sustainable economic growth in commercial units producing home appliances?

In this research, after stating the introduction and the main research question, the theoretical foundations of the research, research methodology, analysis of findings, and finally, the results and suggestions are presented.

2 Methods and Materials

2.1 Study Design and Data Collection

The current research is mixed-method. In the qualitative part of the research, to identify the research variables and their dimensions, since the theoretical foundations of the research topic lack sufficient richness, grounded theory method was used. In qualitative researches, the main tool of research is semi-structured interviews with experts and knowledgeable individuals, for this purpose, the research population in the qualitative section were experts in entrepreneurship management, technology management,

and economics in both public and private universities, as well as managers and entrepreneurs in the home appliance industry who participated in the interview process. To determine the samples of this research and to select this group of experts, purposive sampling was used based on criteria such as Ph.D. education and related executive work experience in the field of entrepreneurship and the home appliance industry. Considering the time and entry criteria for the test, 15 samples were used for conducting interviews and the sampling process continued until reaching the theoretical saturation point. These individuals were calculated to be 11 people according to the purposive snowball method until reaching the theoretical saturation point.

2.2 Data Analysis

The main dimensions and components were exploratorily performed based on the open and axial coding process of the data from in-depth interviews, and the refining of conceptual codes was carried out, and the priority of each of the factors was determined based on the frequency of concepts mentioned in the interviews. Concepts were categorized directly from the transcripts of participants' interviews or according to common codes. The interview transcripts were regularly reviewed to find the main and sub-categories and the importance and priority of these categories. Since the main tool of this research is the use of semi-structured interviews, finally, the codes obtained from the interviews were used for validating the reliability and validity of the codes, using inter-coder reliability, which is a measure for determining the quality of qualitative analysis, and the codes were confirmed.

During the open coding phase, data were carefully reviewed, appropriate phrases and concepts and related categories were identified, dimensions and characteristics were determined, and the pattern was examined. The main unit of analysis for open and axial coding was the concepts derived from the interview, which were created by the researcher directly from the transcript of the interview, and statements were obtained from the interviews.

After preparing and organizing tables as part of the qualitative data analysis from the interviews, to complete the analysis based on open coding, the resulting concepts were grouped at a higher and more abstract level to reach categories. Categorization is a process where concepts need to be grouped. Therefore, again, by constantly comparing concepts with each other, each concept was compared with

the previous or subsequent concepts or with all existing concepts to extract general categories. After comparing the extracted concepts, related concepts were categorized into a general category and general titles for the categories were considered based on existing theories or concepts derived from the research.

In this way, after the continuous comparison of responses obtained from the interviews, similar responses were organized, and similar concepts were extracted from them. Additionally, closely related statements were merged and placed into 6 categories.

3 Findings and Results

Causal factors comprise fifteen codes classified into three core categories: "Organizational Entrepreneurship, Development of Products Based on Industry Standards, and Competitive Advantage." Ultimately, codes selected include "creating internal entrepreneurial conditions for sustainable economic growth, necessary training in organizational entrepreneurship, structural investment for structural entrepreneurship, developing new products in companies with entrepreneurs' intellectual capital, target market development for new products, developing new products according to the quality and world standards in the industry, creating internal competitive advantage for sustainable economic growth, competitive advantage and its alignment with intellectual capital in home appliance companies, and the movement and success of countries in technological advancement in developing countries."

Contextual factors consist of twenty-eight codes classified into three core categories: "Government Support, Developmental Infrastructures, and Financial Support for Standardization in Entrepreneurship." Ultimately, codes selected include "government leadership in creating and developing Iranian creative industries, financial support for entrepreneurial ideas, government financial, legal, and regulatory support for the home appliance industry, creating educational infrastructures for sustainable development growth, creating research and development and information technology infrastructures as priorities in Iran's higher education, technology infrastructures for sustainable economic growth in quick-return industries, encouraging the creation of creative business plans from innovative ideas, government financial support for standardization and quality infrastructures in the industry, and the lack of connection between idea creators and investors for implementing innovative and creative projects."

Intervening factors contain nineteen codes classified into three core categories: "Product Quality Condition for Industry Competitiveness, Sustainability Categories, and Attention to Workforce." Ultimately, codes selected include "lack of sufficient government support and the scarcity of specific incentives for creative industries, the necessity of product quality for competition in the home appliance industry, supportive legal frameworks for creative industries and entrepreneurship, environmental protection and sustainability in new industries, using green materials and production methods in home appliance agendas, sustainable productions at the top of the home appliance industries' agenda, nurturing specialized workforce, the home appliance industry as one of the labor-intensive industries, and support for specialized human resources in sustainable economic growth."

Strategies consist of forty codes classified into three core categories: "Law Reform, Development of Science and Technology Parks, and Accelerating Capital Turnover." Ultimately, codes selected include "reforming monetary and financial laws and regulations in developing countries, reforming and revising labor law with a focus on entrepreneurship as a priority for sustainability and economic growth, revising laws in the home appliance industry sector, developing science and technology parks and small business growth centers, accurately identifying the existing capacities and capabilities of the industry by experts, creating and expanding government-supported knowledge-based companies, high capital turnover costs in home appliance companies, the relationship between profitability and increased capital turnover in emerging home appliance companies, and raising capital turnover speed in the country and distributing facilities for the economic growth of emerging industries."

Outcomes consist of thirty-five codes classified into three core categories: "Trade and Economic Liberalization, Development of the Innovation and Technology Ecosystem, Increased Productivity and Technology Standardization." Ultimately, codes selected include "trade and economic liberalization and new economic policies as a result of sustainable economic growth, developing and facilitating the business environment as a result of economic growth, trade

liberalization in the home appliance industry, developing the innovation and technology ecosystem in the foundations of global economic growth, technology training in various industries for sustainable growth and development in the home appliance sector needs to strengthen the technology ecosystem, increasing productivity through creativity and innovation and modern production systems as a result of creating home appliance industries, the overall productivity of the home appliance sector equals the efficiency in human resources and raw materials and the use of modern technologies, setting environmental standards in the business environment and improving its measurement indices, development and growth of technology standards in companies."

Core factors comprise four codes classified into four core categories: "Technology, Ideation, Employment Generation, and International Competition." Ultimately, codes selected include "technology enhancement with an innovation approach in the home appliance industries, the growth of dynamic and thriving ideas in the startup company sector, increasing employment as effective factors in sustainable development growth, and reforming and facilitating business for competitive positioning."

In the next step, an effort was made to place similar and concurrent categories within the main themes based on the conceptual commonalities among them, thus extracting themes in a more abstract conceptual form. After preparing and organizing a table of concepts and primary categories as the first step in the qualitative analysis of information obtained from interviews, to complete this process, the resulting concepts were grouped at a higher and more abstract level to reach the main themes. After comparing the grouped categories, related categories were grouped into a general theme, and general titles for these themes were considered based on titles existing in related theories or concepts derived from research literature.

Finally, the purpose of selective coding is to create a relationship between the generated categories (in the axial coding stage). This action is usually based on the paradigm model and helps the theorist to easily conduct the theorization process. The basis of connection in axial coding lies in the expansion of one of the categories.

Table 1*Summary of Qualitative Results*

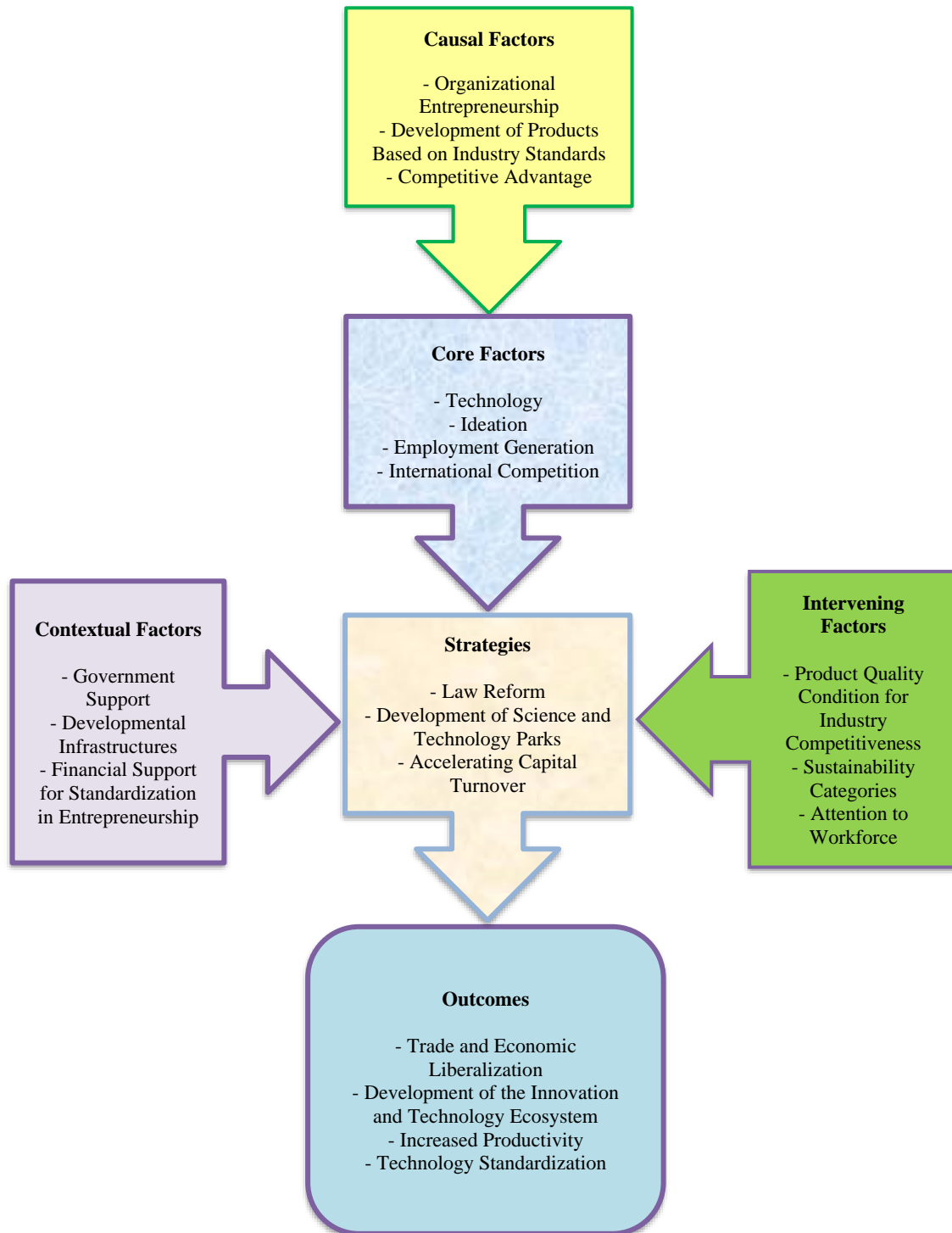
Main Category	Sub-category	Codes
Causal Factors	Organizational Entrepreneurship	- Creating internal organizational conditions for sustainable economic growth - Necessary training in the field of organizational entrepreneurship - Structural investment for structural entrepreneurship
	Development of Products Based on Industry Standards	- Developing new home appliances in companies with entrepreneurial intellectual capital - Target market development for presenting new home appliances - Developing new products according to the quality and world standards in the home appliance industry
	Competitive Advantage	- Creating internal competitive advantage for sustainable economic growth - Competitive advantage and its alignment with intellectual capital in home appliance companies - Movement and success of countries in technological processing in developing countries
Contextual Factors	Government Support	- Government leadership in creating and developing Iranian creative industries - Financial support for entrepreneurial ideas - Government support from a financial, legal, and regulatory perspective for the home appliance industry
	Developmental Infrastructures	- Creating educational infrastructures for sustainable development growth - Creating research and development and information technology infrastructures as priorities in Iran's higher education - Creating technology infrastructures for sustainable economic growth in quick-return industries
	Financial Support for Standardization in Entrepreneurship	- Encouraging the creation of creative business plans from innovative ideas - Government financial support for standardization and quality infrastructures in the home appliance industry - Connection between idea creators and investors for implementing innovative and creative projects
Intervening Factors	Product Quality Condition for Industry Competitiveness	- Lack of sufficient government support and the scarcity of specific incentives for creative industries - Product quality as a necessary condition for competition in the home appliance industry - Supportive legal frameworks for creative industries and entrepreneurship
	Sustainability Categories	- Environmental protection and sustainability in new industries - Using green materials and production methods on the agenda for home appliances - Sustainable productions at the top of the agenda for home appliance industries
	Attention to Workforce	- Nurturing specialized workforce - Home appliance industries as one of the labor-intensive industries - Support for specialized human resources in sustainable economic growth
Strategies	Law Reform	- Reforming monetary and financial laws and regulations in developing countries - Reforming and reviewing labor law with a focus on entrepreneurship as a priority for sustainability and economic growth - Reviewing and reforming laws and regulations in the home appliance industry sector
	Development of Science and Technology Parks	- Developing science and technology parks and small business growth centers - Accurately identifying the existing capacities and capabilities by experts - Creating and expanding government-supported knowledge-based companies
	Accelerating Capital Turnover	- Increasing working capital in home appliance companies - The relationship between profitability and increased capital turnover in emerging home appliance companies - Raising capital turnover speed in the country and distributing facilities for the economic growth of emerging industries
Outcomes	Trade and Economic Liberalization	- Trade and economic liberalization and new economic policy as a result of sustainable economic growth - Developing and facilitating the business environment as a result of economic growth - Trade liberalization of the home appliance industry conditions
	Development of the Innovation and Technology Ecosystem	- Developing the innovation and technology ecosystem in the foundations of global economic growth - Technology training in various industries for sustainable growth and development - Need to strengthen the technology ecosystem in the home appliance sector
	Increased Productivity	- Increasing productivity through creativity and innovation and a modern production system as a result of creating home appliance industries - Total productivity in the home appliance sector equals the efficiency in human resources and raw materials and the use of modern technologies
	Technology Standardization	- Setting environmental standards in the business environment and improving its measurement indices - Development and growth of technology standards in home appliance companies
Core Factors	Technology Ideation	- Technology enhancement with an innovation approach in the home appliance industries - Growth of dynamic and thriving ideas in the startup company sector
	Employment Generation	- Increasing employment as effective factors in sustainable development growth
	International Competition	- Reforming, developing, and facilitating business to achieve a competitive position

In the selective coding stage of the current research, the main category's relationship with other categories was defined. In this stage, the primary and secondary classes were connected to each other to theorize conceptual frameworks for presenting a model of creativity, innovation, and entrepreneurship towards sustainable economic growth

in commercial production units. These actions enabled the researcher to integrate the concepts obtained in the open and axial coding stages and use them to propose a model for self-employment services. To this end, using a qualitative research method, we identified the role of the extracted categories within a paradigmatic model as follows:

Figure 1

Paradigm Model



4 Discussion and Conclusion

With semi-structured interviews conducted in Tehran province, initially, concepts and key points obtained from the interviews were reviewed and listed. In the second phase,

from the compilation and categorization of the interviews, phrases, concepts, and derived statements were unified (choosing more accurate words, eliminating common concepts), and 137 open codes emerged in the preliminary section. The obtained codes were prepared in a checklist

format, and with consultation with experts, some of the derived statements were deleted or revised, and selective codes were enumerated. The results of the present study align with the previous research (Abasi Nami, 2021; Badraghnezad et al., 2022; Ghaseminoughabi & bahramzadeh, 2023; Mohammadzadeh et al., 2020; Sadeghi, 2018; Safardoust et al., 2023).

Indeed, entrepreneurship provides the capability and potential for a company to gain a competitive advantage. Competitive advantage arises from five key organizational capabilities, namely: adaptability; flexibility; speed; aggressive approach, and innovation (prioritizing the development and launch of new products, services, processes, markets, and leading-edge technologies in the market). Corporate entrepreneurship has the potential to empower the company in the aforementioned arenas, making it a leader in today's competitive market. The existing problems in large businesses often hinder creativity and innovation and the growth resulting from them, and this situation seems challenging in large companies with rigid vertical integration (Badraghnezad et al., 2022). However, small organizations that emerge after dividing a large company into several smaller companies usually perform more efficiently in the competitive market than smaller existing businesses in the business space, resolving resistance against flexibility, growth, and diversity with the development of an entrepreneurial spirit in these newly independent small companies, which is the true essence of corporate entrepreneurship.

In recent years, importing home appliances to the country was one of the high-income import sectors. However, currently, with the imposition of strict restrictions by the Ministry of Industry, Mine and Trade, registration and importation of foreign home appliances have been banned. This decision was apparently made in support of national production. According to information provided by the Ministry of Industry, Mine and Trade, production in the home appliance industry has constituted more than eight percent of Iran's exports. The high demand in administrative, commercial, and especially residential sectors for home appliances can be an important platform for accelerating the country's economic growth process and exiting the prevailing recession conditions. Also, this industry, while creating direct and indirect employment in its activity area, leads to the expansion of job creation through other dependent industries such as steel and petrochemicals in the country's economic system. Globalization and presence in international markets require the production of home

appliances with quality and competitive prices on a global scale and increasing production beyond the minimum necessary for consumption (Sadeghi, 2018). Exploiting opportunities and accessing new markets, meeting customer and societal expectations, require government foundational support and creating changes to reduce the final cost of products. Analyzing the problems of the home appliance industry, as one of the largest potentials in the country's manufacturing industry, clearly indicates the lack of attention to this area and the absence of suitable infrastructure in it to support manufacturers. Among the main points that should be the focus of government attention is the support for original Iranian brands in the home appliance sector. In the home appliance industry, foreign companies are eager for their international development, and their comparative advantage in this field is having high-quality products (Safardoust et al., 2023; Sahafzadeh & Haghighi, 2023). However, with the increase in currency prices, the prices of these goods have also increased and become unaffordable for lower-income customers, thus leaving a part of the market vacant. One of the ways to control the outflow of currency from the country is to support domestic production. If there is no demand for foreign goods, domestic goods can well meet the needs of the people.

Entrepreneurship and financial and moral support for home appliance manufacturers can be seen as the driving engine of production, job creation, and thereby achieving economic growth in the country and improving per capita income; therefore, the government should create sensitivity and importance of attention to domestic production in decision-making managers of the country. In summary, as long as the country does not pay appropriate attention to entrepreneurs and the field of entrepreneurship and does not make suitable investments in this sector, perhaps it cannot be too hopeful about solving unemployment problems, which are factors of sustainable development growth. The entrepreneurship and employment ecosystem is a new phenomenon to combat unemployment, which can solve the challenges of unemployment for the university-educated generation. Hence, the expansion of startups for creating and developing competition in the home appliance industry is one of the most important effective components in the entrepreneurship technology ecosystem in this industry, which facilitates economic development.

Suggestions for Practice:

Eliminating unnecessary administrative bureaucracy and consolidating permits: It can be confidently said that there is

hardly any sector or industry where entrepreneurship does not require time-consuming and sometimes irrelevant permits. Good efforts are underway at the Ministry of Economic Affairs and Finance to identify, enumerate, and remove the unnecessary bulk of these regulations and permits that have only increased in volume over decades. Therefore, it is recommended that unnecessary laws and regulations be reduced and the processes required for entrepreneurship be clarified.

Creating a credit evaluation system: To avoid bias and prejudice in selecting qualified individuals for financial facilities and granting various loans, there is no alternative but to have a credit evaluation system where all necessary criteria for evaluating a business, like product quality, customer feedback, repayment history, sales volume, etc., are considered.

Enabling the use of international markets for selling home appliances with proper advertising and support from the government and relevant organizations.

Facilitating the acquisition of technologies and modern knowledge from advanced countries, the possibility of foreign exchange transactions, and foreign investment in innovative ideas in the home appliance industry.

Utilizing the experiences of successful countries in the field of entrepreneurship and technological parity in the home appliance industry.

Updating information and communication technology infrastructures to enable the use of new methods and techniques in information and communication technologies.

Creating financial and legal government support for startup and knowledge-based businesses.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

- Abasi Nami, H. (2021). The Impact of Entrepreneurship on the Economic Growth of MENA Countries. *Quarterly Journal of Applied Theories of Economics*, 8(1), 215-240. <https://doi.org/10.22034/ecej.2021.42199.2735>
- Badraghnezad, A., Mohammadi Khyareh, M., & Adabi Firouzjaee, B. (2022). Investigating the relationship between entrepreneurship, economic growth and employment; panel VAR approach. *Journal of Econometric Modelling*, 7(1), 123-153. <https://doi.org/10.22075/jem.2022.25702.1680>
- Cheraghi, B., Torabi, T., Mohammadi, T., & Taghavi, M. (2019). Investigating the Factors of Non-Realizing Sustainable Economic Growth in Terms of Social Capital in Iran, s Economy. *Economic Growth and Development Research*, 9(34), 77-98. <https://doi.org/10.30473/egdr.2018.40618.4846>
- Ghaseminoughabi, M., & bahramzadeh, m. (2023). Investigating the relationship between new product creativity dimensions and purchase intention through perceived values (Study case: Snowva home appliance customers). *Essays in Management*, 3(1), 139-148. <https://doi.org/10.22034/jsm.2023.417742.1027>
- Jiang, Y., Qian, Q., Zhang, X., & Chen, Y. (2019). The Formation of Government-Oriented Creative Community and Its Driving Mechanisms: A Case Study of the 39° Space Art Creative Community in Foshan, China. *Sustainability*, 11(3), 625. <https://doi.org/10.3390/su11030625>
- Krishna, V. V. (2019). Universities in the National Innovation Systems: Emerging Innovation Landscapes in Asia-Pacific. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(3), 43. <https://doi.org/10.3390/joitmc5030043>
- Luger, J. D. (2019). When the creative class strikes back: State-led creativity and its discontents. *Geoforum*, 106, 330-339. <https://doi.org/10.1016/j.geoforum.2017.04.012>
- Mohammadzadeh, P., Khangaldizadeh, S., & Kamangar, S. (2020). The Impact of Innovation and Entrepreneurship on Economic Growth: An Intercountry Study. *Iranian Journal of Economic Research*, 25(82), 121-148. <https://doi.org/10.22054/ijer.2020.11912>
- Moridsadat, P., Ruknuddin Eftekhari, A. R., Pourtaheri, M., & Shabanali Fami, H. (2017). Analyzing the status of sustainable entrepreneurship in macro and sectoral agricultural policies of the Islamic Republic of Iran. *Rural researches*, 8(1), 82-99.

https://jrur.ut.ac.ir/article_62142_d69018771145b215c19a7e_cb525b26d2.pdf

- Pyka, A., Bogner, K., & Urmetzer, S. (2019). Productivity Slowdown, Exhausted Opportunities and the Power of Human Ingenuity—Schumpeter Meets Georgescu-Roegen. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(3), 39. <https://doi.org/10.3390/joitmc5030039>
- Rodrigues, M., & Franco, M. (2019). Composite Index to Measure Cities' Creative Performance: An Empirical Study in the Portuguese Context. *Sustainability*, 11(3), 774. <https://doi.org/10.3390/su11030774>
- Sadeghi, H. (2018). Examining the balance of population growth and economic growth in achieving sustainable economic growth (case study: countries with upper middle income during the years 1985 to 2016) [Research]. *Economic magazine (bimonthly review of economic issues and policies)*, 18(3), 103-117. <http://ejip.ir/article-1-1025-fa.html>
- Saeedi motlagh, M. h., & Karimishad, F. (2022). Open innovation through the lens of the home appliance industry. *Journal of Innovation Ecosystem*, 2(4), 37-52. <https://doi.org/10.22111/innoeco.2023.44091.1048>
- Safardoust, A., Pourqasem sostani, M., & Salami, R. (2023). Identifying strategic components affecting the position of small home appliance industry. *Journal of Strategic Management Studies*, 14(53), 1-24. <https://doi.org/10.22034/smsj.2023.169392>
- Sahafzadeh, A., & Haghighi, M. (2023). D1) Designing a Model for Empowering Iranian Brands with an Emphasis on the Open Innovation Approach in the Home Appliances Industry. *New Marketing Research Journal*, 12(4), 91-112. <https://doi.org/10.22108/nmrj.2023.135031.2756>
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The Nexus between Entrepreneurship and Economic Growth: A Comparative Analysis on Groups of Countries. *Sustainability*, 12(3), 1186. <https://doi.org/10.3390/su12031186>
- Trillo, C. (2019). The Rise of the Co-creative Class: Sustainable Innovation-Led Urban Regeneration. In F. Calabrò, L. Della Spina, & C. Bevilacqua, *New Metropolitan Perspectives* Cham.