





Designing an Educational Model for a Knowledge-Based Resistance Economy at Islamic Azad University: A Qualitative Study

Manouchehr. Sadeghian¹, Baharak. Shirzad Kebria^{2*}, Fatemeh. Hamidifar², Abbas. Khorshidi³

¹ PhD Student, Department of Educational Management and Higher Education, Central Tehran Branch, Islamic Azad University, Tehran, Iran

² Associate Professor, Department of Educational Management and Higher Education, Central Tehran Branch, Islamic Azad University, Tehran, Iran

³ Professor, Department of Educational Management, Islamshahr Branch, Islamic Azad University, Islamshahr, Iran

* Corresponding author email address: bshertzad86@yahoo.com

Article Info

Article type:

Original Research

How to cite this article:

Sadeghian, M., Shirzad Kebria, B., Hamidifar, F., & Khorshidi, A. (IN PRESS). Designing an Educational Model for a Knowledge-Based Resistance Economy at Islamic Azad University: A Qualitative Study. *International Journal of Innovation Management and Organizational Behavior*.
<https://doi.org/10.61838/kman.ijimob.5.x.x>



© 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 objective of this study is to develop a competency model for managers at the Foundation of Martyrs and Veterans Affairs, focusing on the knowledge-based resistance economy.

Methods and Materials: This qualitative research employs a grounded theory approach using a systematic paradigm. Data were collected from 15 experts in human resource and educational management through semi-structured interviews. The interviews were analyzed using open, axial, and selective coding to identify 143 indicators, 22 components, and 5 dimensions.

Findings: The research identified five main dimensions: causal factors, contextual factors, intervening factors, strategies, and outcomes. These dimensions encompass 22 components, such as upstream documents, media, organizational mission, human resources, technology, financial resources, and planning. The model highlights the significant role of media, organizational structure, and human resource management in supporting the knowledge-based resistance economy.

Conclusion: The proposed model provides a comprehensive framework for developing competencies among managers in the Foundation of Martyrs and Veterans Affairs. It aligns with global trends in the knowledge-based economy and offers strategies for improving economic resilience, organizational effectiveness, and human capital development in line with the principles of the resistance economy.

Keywords: *resistance economy, knowledge-based, causal factors, intervening factors, contextual conditions, strategies, outcomes, outputs*

1 Introduction

A resistance economy refers to an economy that can determine the country's growth and prosperity under conditions of pressure, sanctions, and severe hostility (Rahbar & Nikchehreh, 2020). The resistance economy is a specific paradigm of knowledge and economic systems that primarily pursues strategies and policies for rational and efficient confrontation with economic imbalances, crises, natural disasters, sanctions, and negative economic shocks (Alipour et al., 2020). In our country, sanctions and the consequent reduction in oil revenues have led to a decrease in economic capability and an increase in the costs of the Iranian economy (Safar zad et al., 2020). Changes in the country and its economic system have necessitated the creation of an economic model. In alignment with these changes, the general policies of the resistance economy were issued with the aim of ensuring dynamic growth, improving economic resilience indicators, and achieving the goals of the twenty-year vision document, with a jihadist, flexible, opportunity-creating, productive, endogenous, leading, and outward-oriented approach (Fard et al., 2021).

In the face of sanctions, to overcome limitations, grow businesses, neutralize sanctions concerning businesses, combat inflation, and achieve self-sufficiency, the principle of the resistance economy is of great importance. One of the best manifestations and most effective components of the resistance economy is knowledge-based companies, which can strengthen the sustainability of the resistance economy. It has been stated that if knowledge-based companies are taken seriously and supported in terms of quantitative and qualitative development, the country's economy will achieve genuine prosperity through wealth creation via science (Maleki et al., 2019).

Therefore, in conditions of sanctions, greater attention to the knowledge-based economy and efforts to enhance their capabilities, with the aim of moving away from reliance on the sale of natural resources and transitioning toward a knowledge-based economy, become more necessary than ever (Ziyaei et al., 2021). For the advancement of a knowledge-based economy, research collaboration led by a national research and innovation program, supported by appropriate national and institutional structures, systems, and incentives, is critical. A knowledge-based economy is one in which knowledge drives economic growth and development. As a result, large investments are made in research, innovation, and human and social capital. Cooke and Leydesdorff (2006) differentiate between a knowledge-

based economy and a knowledge economy, showing that the knowledge economy focuses on workforce composition, whereas the knowledge-based economy grows from built advantages and technological regimes that emerge from them (Phale et al., 2021; Radu, 2023; Ranjbar Fallah & Fatahi, 2024).

Furthermore, it argues that the knowledge-based economy is analytically distinct from the knowledge economy because, in the former, codified knowledge is regarded as the key to economic growth and development, whereas, in the latter, the emphasis is on knowledge workers, and thus, on tacit or embodied knowledge (Musselin, 2018). In a more detailed definition, a knowledge-based economy is an economy that uses knowledge as the main driver of economic growth. Essentially, it is an economy in which the primary factors of growth, wealth generation, and employment across all industries are the production, distribution, and use of knowledge. In particular, countries need knowledge-based economies not only to create more effective domestic economies but also to take advantage of economic opportunities beyond their borders. The use of knowledge, manifested in areas such as research and development, entrepreneurship, and innovation, and at the level of education and skills of individuals, is now recognized as one of the main drivers of growth, productivity, and competitiveness in the global economy.

The concept of knowledge for this analysis is drawn from the framework of the World Bank's knowledge economy, which categorizes knowledge into four pillars: the economic and institutional regime, education and skills, an effective innovation system, and information and communication technology infrastructure, all of which constitute a country's knowledge economy (Ranjbar Fallah & Fatahi, 2024; Safar zad et al., 2020). According to the World Bank, the knowledge-based economy has been steadily growing, and it is expected that by 2025, the global digital economy will account for 24.3% of the world's gross domestic product. Moreover, the World Intellectual Property Organization reported a significant increase in global patent applications, indicating a rise in innovation and intellectual property creation (Hedayat et al., 2022; Kamiab et al., 2023).

The shift toward a knowledge-based economy is also reflected in the increasing share of employment in knowledge-intensive industries, such as information technology and research and development. In Iran, according to the Deputy for Knowledge-Based Companies at the Scientific and Technological Department, the number of knowledge-based companies is approximately 9,000,

which, in addition to creating 340,000 jobs, generates more than 500 trillion tomans in product sales. Given that the world is witnessing the fourth wave of the industrial revolution, i.e., knowledge-based development, we too must undergo new transformations in ourselves to realize the resistance economy, as it is no longer possible to remain resilient to threats with outdated industries and an obsolete economy (Alem Tabrizi et al., 2022; Alipour et al., 2020; Fard et al., 2021).

In addition to emphasizing the knowledge-based economy within the framework of resistance economy policies, the importance of high-tech and knowledge-based industries has also been emphasized in the country's upstream documents, including the twenty-year vision document (Ziyaei et al., 2021). In summary, it can be inferred that supporting and expanding knowledge-based companies can serve as a bridge toward greater prosperity in the resistance economy, a concept that has been repeatedly emphasized over at least the past decade. Islamic Azad University in Tehran faces a critical challenge in aligning its educational model with the principles and requirements of the knowledge-based resistance economy. The current educational framework may not sufficiently prepare students to participate effectively in an economy that emphasizes innovation, technological advancement, and resilience in the face of economic challenges. There is a pressing need to design and implement an educational model that integrates the core principles of the knowledge-based resistance economy within the framework of Islamic Azad University, especially in its Tehran branches.

Nasrabadi and Mosavian (2023) conducted research titled "Strategic Model of Passive Defense Economics to Realize the Resistance Economy." Using the Analytical Network Process (ANP) method, they ranked the strategies of the intended model. The results identified 15 strengths, 26 weaknesses, 9 opportunities, and 10 threats. Among the main criteria, "weakness" ranked first with a weight of 0.316, "strength" ranked second with a weight of 0.298, "opportunity" ranked third with a weight of 0.237, and "threat" ranked fourth with a weight of 0.149 (Nasrabadi & Mousavian, 2023).

Kamiab and colleagues (2023) conducted research in the field of the resistance economy. The objective of this study was to explore financing methods for sports clubs under the resistance economy approach in sanction conditions. This research employed a survey methodology, conducted in the field. The statistical population of the study included all experts and informed individuals in the field of sports

economics. The most important factors influencing the resistance economy in this study were financial conditions, organizational structure, organizational culture, management, and media (Kamiab et al., 2023).

Hedayat and colleagues (2022) designed a model for developing small and medium-sized enterprises (SMEs) with an emphasis on the role of the resistance economy. This study aimed to design a development model for SMEs with an emphasis on the role of the resistance economy in Lorestan Province. The resulting model from this study showed that the main category leading to the development of SMEs in Lorestan Province is the "Resistance Development Plan." The causal factors affecting this process include components such as access conditions and planning; contextual factors include the improvement of the business environment; intervening factors include obstacles; and strategic factors include the application of resistance economy principles. The outcomes of this process include achieving economic and scientific power (Hedayat et al., 2022).

Ranjbar Falah and Fathi (2024) studied investments in startups to achieve a resistance economy and economic defense. The resulting model from this research indicates that the main category connecting startups and the resistance economy is the inclination toward a knowledge-based economy. Among the causal factors affecting this process are components like the entrepreneur's mindset, inward-looking perspective, value-driven model, risk-taking, and teamwork. Environmental factors include government, media, universities, and the social environment; intermediate or contextual factors include networks, culture, governmental institutions, human capital, the education system, and social capital; and strategies include financing, management consulting, accelerators, entrepreneurial intent, and productivity, all leading to the creation of economic and defensive value and increasing economic resilience (Ranjbar Fallah & Fatahi, 2024).

Radu (2023) conducted research on the knowledge-based economy. The results showed that the foundations of the knowledge-based economy include essential processes, such as knowledge creation, acquisition, dissemination, and application, provided that the necessary financial resources and up-to-date technology are available, which results in strength in scientific, economic, and even political domains (Radu, 2023).

Alkali (2021) studied knowledge-based management and talent management, focusing on efforts to enhance the economic value of universities. With economic

transformations in the global era, universities are obligated to increase their efficiency and effectiveness in the face of intensified commercial competition. Employing a knowledge-based economy is one of the factors that can help achieve this goal. In conclusion, the essential components for a knowledge-based economy in universities include human resources, financial capital, organizational culture, capable management, laws and regulations, and proper planning (Alkali, 2021).

This includes a comprehensive review of the current curriculum, teaching methods, and institutional support systems to identify gaps and areas for improvement, equipping students to engage actively in a dynamic and knowledge-driven economic landscape. Additionally, this study should examine the specific challenges and opportunities present in Tehran, given its unique economic, social, and cultural dynamics. The educational model should be designed to address the region's specific needs and industry requirements, fostering a symbiotic relationship between the university and the local economy.

Although attention must be paid to the knowledge-based and resistance economy in industry, for the sake of educational effectiveness, it is essential to formulate, implement, and follow up on it within the framework of an educational program. In this regard, and considering the new transformation document in Islamic Azad University, which aims to present this university as a leading and responsive institution, attention to the knowledge-based economy and its indicators seems necessary. This will enable the university to generate income and achieve sustainable development not through tuition fees but through the creation of knowledge. On the other hand, the focus on resource efficiency, considering the current situation in the country, is of paramount importance.

However, research indicates that a knowledge-based resistance economy management model does not exist within the country's educational programs or in the programs of universities and educational institutions. Furthermore, one of the most critical issues for the university's income generation is the role of efficient employees, academic staff, and managers, which has been overlooked in this process. Studies show that research leading to innovation often fails at its early stages and cannot align with knowledge-based efforts. Moreover, the organization's asset portfolio in sectors that should be productive is not at a desirable level.

Given the historical close relationship between universities and industry, the lack of a model emphasizing

the role of a knowledge-based economy in the resistance economy will cause problems for the government, managers, industries, universities, and research environments like science and technology parks in the country. This model must incorporate indicators related to the resistance economy while also emphasizing factors and indicators of a knowledge-based economy to reduce costs, encourage innovation, and enhance competitive advantage in educational management.

A review of the research literature shows that although models regarding either the knowledge-based economy or the resistance economy—or a combination of both—have been proposed, there is no comprehensive research with a deductive approach that also considers knowledge-based indicators in designing a resistance economy model in education, especially at such a large scale and among academic figures. No research has been conducted regarding knowledge-based resistance economy education, and there are no indicators that could help design an educational model.

Another challenge faced by the Islamic Azad University branches in recent years is their financial losses and sole reliance on tuition fees to advance the university's goals and ensure its survival, which contradicts the new transformation document of Islamic Azad University and has led to the closure of some branches.

In light of the above, the researcher seeks to answer the following questions:

1. What is the educational model of the knowledge-based resistance economy at Islamic Azad University?
2. What are the components and indicators constituting each dimension of the mentioned model, and how are they prioritized according to expert opinions?

2 Methods and Materials

The present study is applied in terms of its objectives, qualitative in terms of data, and grounded theory (systematic paradigm) in terms of its nature and type of study. The statistical population of this study includes experts in the fields of human resource management and educational management. Using theoretical sampling based on theoretical saturation, 15 experts were selected. The research measurement tool was a semi-structured interview, which was analyzed using open coding and axial coding. Subsequently, selective coding was conducted through

interviews and brainstorming sessions, during which the components and indicators were finalized and prioritized by the experts. The model was then drawn based on dimensions, components, and indicators, and validated by the experts. The validity and reliability of the measurement tool were established through the triangulation method. Data collection was conducted through in-depth interviews with experts, followed by open coding of the findings from the first stage. Afterward, axial coding was carried out to categorize the indicators into dimensions and components. In the next stage, a semi-structured interview form was developed, and brainstorming was conducted with the experts, continuing until theoretical saturation was reached. At the conclusion of the model extraction, the components and indicators were validated and prioritized by the experts. Data analysis was carried out in three stages of open, axial, and selective coding.

The most important part of data analysis was coding (open, axial, and selective), which was performed as follows:

Figure 1

Scree Test for Determining the Number of Components

Open Coding: The interviews were transcribed, and the data were standardized. Scientific terms were selected based on the theoretical literature of the research, resulting in a list of concepts. These concepts were then categorized.

Axial Coding: The categories derived from open coding were related to each other, creating relationships between the codes produced in the open coding process.

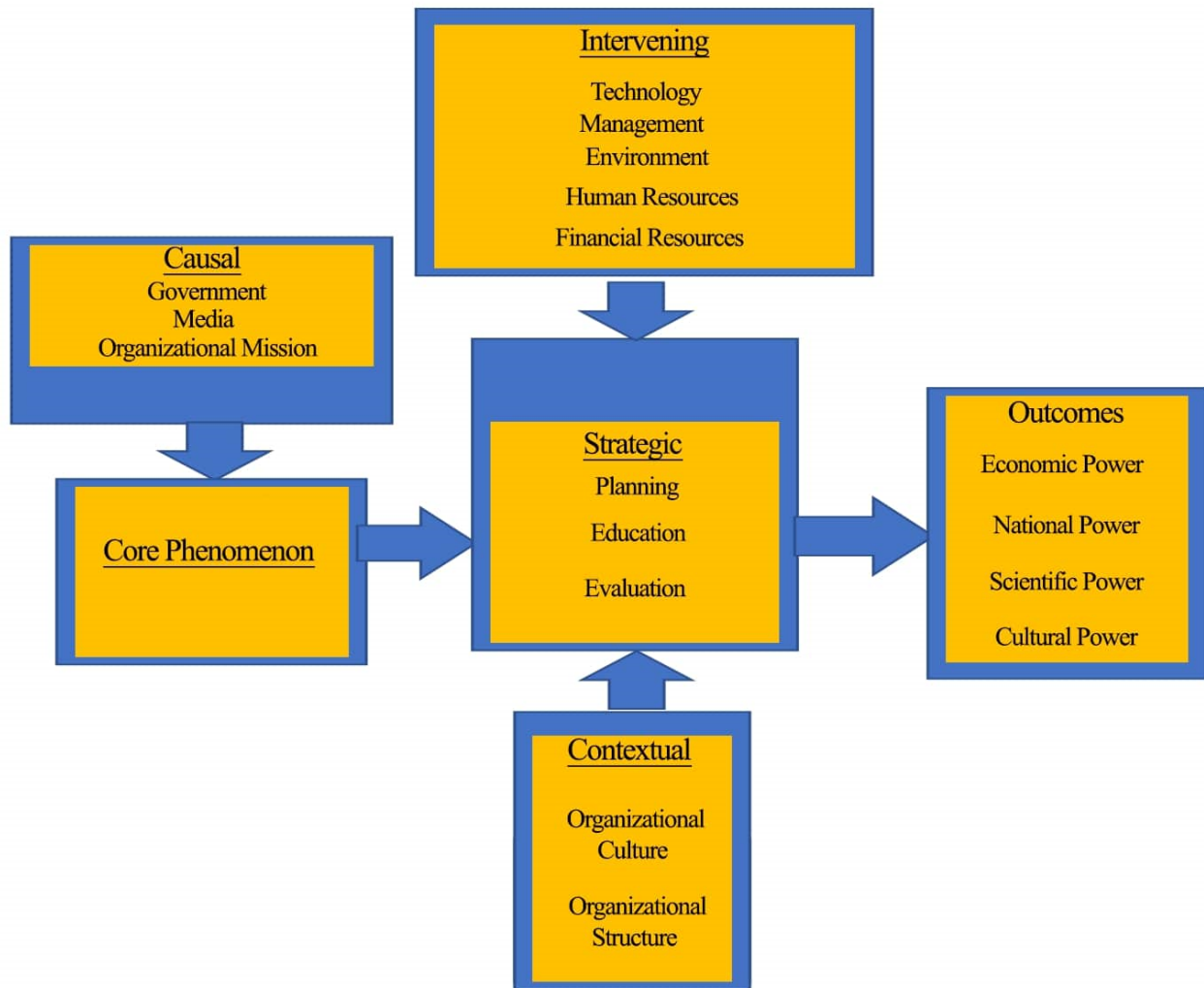
Selective Coding: In this stage, the process of integration, refinement, and enhancement of categories was performed. The researcher arranged the categories in a particular order, thus forming a theory by discovering the central category.

3 Findings and Results

In response to the research questions, the following results were obtained:

1. What is the educational model for the knowledge-based resistance economy at Islamic Azad University?

The result of the research presents the educational model for the knowledge-based resistance economy at Islamic Azad University as follows:



2. What are the components and indicators constituting each dimension of the mentioned model (from the experts' perspective), and how are they prioritized?

To answer this question, the researcher identified examples related to the knowledge-based resistance economy. First, an interview checklist was prepared, and the experts' opinions were gathered. The semi-structured

interviews with experts resulted in numerous examples, showing that the knowledge-based resistance economy at Islamic Azad University could differ from other institutions. The semi-structured interviews led to the identification of 121 initial codes (key concepts). Below is a table presenting some of the initial codes identified from the interview transcripts (Table 1):

Table 1

Interview Texts and Extracted Indicators

Interview Text	Extracted Indicators
When laws are enacted, regulations are then approved, facilitating the evaluation of knowledge-based companies. A criterion is established for evaluation.	Developing and approving regulations for the evaluation of knowledge-based companies and institutions
One of the essential needs for establishing knowledge-based centers is providing appropriate locations in terms of geography, area, facilities, etc.	Providing suitable locations for the establishment of knowledge-based centers
The mission of knowledge-based organizations is to create a balance between production and consumption, emphasize domestic consumption, and expand and encourage domestic consumption.	Creating a balance between production and consumption
Providing the necessary financial resources and covering the costs for implementing knowledge-based projects at the university must be done promptly because competition is high, and success cannot be achieved without sufficient financial resources.	Forecasting and allocating necessary funds for knowledge-based programs

What are the components constituting the educational model for the knowledge-based resistance economy at Islamic Azad University?

After identifying open codes (indicators) related to the knowledge-based resistance economy from the interview transcripts, the researcher categorized these indicators. Since the main unit of analysis for open and axial coding is concepts, during the analysis, the concepts were directly labeled by the researcher based on the interview transcripts or created based on their commonalities. The interview transcripts were systematically reviewed to identify indicators and components, leading to the identification of

17 components that contribute to the establishment of a knowledge-based resistance economy. Thus, multiple concepts (indicators) were grouped to form overarching categories, referred to as axial codes. The identified axial codes, along with the open codes (indicators), are presented in Table 2. (To avoid excessive length, only the number of identified indicators for each component is mentioned.)

Based on the analysis and coding process of the interviews, the initial codes were standardized, and some were removed or revised. Ultimately, 121 codes were identified as open codes, as shown in Table 2.

Table 2

Dimensions, Components, and the Number of Indicators in the Educational Model for the Knowledge-Based Resistance Economy at Islamic Azad University (in the Axial Coding Stage)

Dimensions	Components	Number of Indicators
Causal	Government	9
	Media	6
	Organizational Mission	6
Contextual	Organizational Culture	8
	Organizational Structure	7
Intervening	Technology	3
	Management	6
	Environment	5
	Human Resources	10
	Financial Resources	5
Strategic	Planning	3
	Education	7
	Evaluation	6
Outcomes	Economic Power	13
	National Power	7
	Scientific Power	10
	Cultural Power	6

In the selective coding stage, the identified components were grouped into more abstract categories. After a brainstorming session with experts, the dimensions of the educational model for the knowledge-based resistance economy at Islamic Azad University were shaped. As a result, 143 open codes (indicators) were categorized into 22

axial codes (components), and the components were classified into five selective codes (dimensions). The dimensions, components, and indicators obtained are presented in Table 3. (To avoid excessive length, only the number of identified indicators for each component is mentioned.)

Table 3

Dimensions, Components, and the Number of Indicators in the Educational Model for the Knowledge-Based Resistance Economy at Islamic Azad University (in the Selective Coding Stage)

Dimensions	Components	Number of Indicators
Causal	Upstream Documents	6
	Media	6
	Organizational Mission	6
Contextual	Human Resources	10

	Organizational Culture	7
	Technology	5
	Financial Resources	5
	Organizational Structure	7
	Management	6
Intervening	Legal Conditions	9
	Political Conditions	4
	Economic Conditions	6
	Social Conditions	7
	Cultural Conditions	4
	Environmental Conditions	4
Strategic	Planning	4
	Education	6
	Evaluation	6
Outcomes	Economic Development	13
	Social Development	7
	Scientific Development	9
	Political Development	6

In the final stage, a brainstorming session was held to review and analyze all the identified components and indicators. Initially, the obtained components and indicators were sent to 20 experts, and their feedback was gathered. The collected feedback was applied to the identified factors, and the revised version was sent back to the experts for validation.

Theoretical Validation of the Model: In this stage, the dimensions, components, and indicators of the educational model for the knowledge-based resistance economy at

Islamic Azad University were organized into a model and validated by the experts. The content validity ratio (CVR) was calculated, and the factors constituting the model were confirmed.

To further validate the components and indicators, another brainstorming session was held with five university experts. Their feedback on the prioritization of the components and indicators was incorporated, and the results are presented in [Table 4](#).

Table 4

Prioritization of the Components in the Educational Model for the Knowledge-Based Resistance Economy at Islamic Azad University

Dimensions	Components	Priority
Causal	Upstream Documents	1
	Media	2
Contextual	Organizational Mission	3
	Human Resources	1
	Organizational Culture	2
	Technology	3
	Financial Resources	4
	Organizational Structure	5
	Management	6
Intervening	Legal Conditions	1
	Political Conditions	2
	Economic Conditions	3
	Social Conditions	4
	Cultural Conditions	5
	Environmental Conditions	6
Strategic	Planning	1
	Education	2
	Evaluation	3
Outcomes	Economic Development	1

Social Development	2
Scientific Development	3

Table 4 shows that all fit indices support the acceptable fit of the two-factor model of the questionnaire with the collected data. Based on this, it was concluded that the measurement model of the questionnaire has an acceptable fit with the collected data.

4 Discussion and Conclusion

The present research aimed to provide a competency model for the managers of the Foundation of Martyrs and Veterans Affairs, and ultimately, 143 indicators, 22 components, and 5 dimensions were identified for the proposed model through a qualitative study with a grounded theory paradigm approach. The systemic model's core dimensions consist of five categories: causal factors, contextual factors, intervening factors, strategies, and outcomes, which include 22 components, namely: upstream documents, media, organizational mission, human resources, organizational culture, technology, financial resources, organizational structure, management, legal conditions, political conditions, economic conditions, social conditions, cultural conditions, environmental conditions, planning, education, evaluation, economic progress, social progress, scientific progress, and political progress.

Ultimately, the findings of this study revealed that each of the identified components is composed of specific indicators. In explaining the research findings, it can be stated that this model helps to identify key factors in the knowledge-based resistance economy at Islamic Azad University. Globalization and modernization present a continuous challenge for many societies. As borders between countries become more permeable due to technological advances, migration, and a more mobile workforce, every nation must develop a strategic response to enhance human capital development in order to compete economically in the global marketplace. One approach taken by many countries is the development of knowledge economies. In particular, in countries that are members of the Organisation for Economic Co-operation and Development (OECD), knowledge is increasingly recognized as the primary driver of productivity and economic growth. This has led to a new paradigmatic understanding of the role of information, technology, and learning in economic performance.

The results also indicate that the knowledge-based resistance economy consists of various components. In this

study, the causal dimension includes components such as upstream documents, media, and the organizational mission. Causal conditions refer to events that influence the central phenomenon and partly explain why and how individuals and groups engage with the phenomenon. Specifically, causal conditions are events and occurrences that impact and lead to the emergence of the phenomenon. Regarding the components of causal conditions, one of the most important issues in planning and decision-making is adherence to upstream documents such as the constitution and the guidelines of the Supreme Leader, especially the "Second Step Statement." Regarding the media, it can be stated that there is a positive relationship between the use of domestic media and a culture of resistance economy. Given the important and influential role of media in this regard, it is essential to utilize the capabilities of media in fostering a culture and simplifying the explanation of policies and presenting practical solutions for the resistance economy, thus facilitating a better understanding and social acceptance of the concept.

Moreover, organizational structure holds significant importance for any organization as it organizes and coordinates activities, improves efficiency and effectiveness, and enhances flexibility and productivity. By selecting an appropriate organizational structure, an organization gains the ability to continually improve and develop, achieving the best results for its success.

In explaining the second dimension, it can be stated that contextual conditions refer to the circumstances under which strategies and actions are carried out to manage the phenomenon. These include human resources, organizational culture, technology, financial resources, organizational structure, and management. Resources are one of the key concepts in an organization, as they contribute to the optimal utilization of various resources, create balance and coordination among them, and help achieve the organization's goals and strategies. Resource management has become an essential and fundamental reality in realizing organizational goals. The more precisely and effectively resource management is executed, the greater the organization's productivity, the lower the wastage of resources, and the stronger its competitive power. Additionally, examining the organizational structure is essential for achieving organizational objectives, as it dictates how the workflow in an organization will proceed.

This structure enables individuals in different units to collaborate on their tasks and fulfill the requests of the senior management.

Intervening conditions act as facilitators or constraints on strategies. These conditions either facilitate and accelerate the implementation of strategies or serve as obstacles, causing delays. Legal, political, economic, social, cultural, and environmental conditions were identified as the intervening conditions in this study. There are reciprocal relationships between the individuals and groups within an organization, who each play a role in advancing its goals, and between the organization and its environment. These organizations, created to meet social needs and play a vital role in societal transformation, also contribute to implementing development programs, while simultaneously facing challenges that collectively constitute the organization's conditions.

The fourth dimension refers to the strategies of the knowledge-based resistance economy model. Strategies and actions are plans and initiatives that help design the model. The identified components include planning, education, and evaluation. One reason for the importance of planning in time management is the timely execution of tasks. The characteristics of an effective plan include prioritization, flexibility, clarity, and the ability to inspire motivation. Additionally, in the learning process, educational content is a key factor, playing a crucial role in transferring information, knowledge, and skills to the audience. Educational content acts as a guide, learning resource, and set of practical strategies for learners. On the other hand, a country's educational activities can be considered one generation's investment in another, with the goal of human development. Given the scope and complexity of educational activities and the need to assess their outcomes, evaluating programs, staff, and services can play a critical role in improving educational quality and, as a result, enhancing individual performance.

In explaining the fifth dimension of this research, which refers to outcomes, it can be stated that outcomes include visible and intangible impacts resulting from the implementation of a particular program. These outcomes are essentially the results of the plan. Economic progress, social progress, scientific progress, and political progress are the identified components of this outcome dimension. Scientific and technological power is the source of political, military, cultural, and economic power. Knowledge-based economic development is therefore considered a prerequisite for all essential activities aimed at advancing the country.

Consequently, these initiatives, through the identified components and indicators, can lead to the development of a knowledge-based resistance economy.

The findings of this research align with other studies. For instance, they are consistent with the research of Nasrabadi and Mousavian (2023) in terms of technological structure, trained human resources, appropriate financial resources, governance, laws, and regulations (Nasrabadi & Mousavian, 2023). Kamiab et al. (2023) emphasized financial conditions, organizational structure, organizational culture, management, and media (Kamiab et al., 2023). Hedayat et al. (2022) highlighted environmental factors such as government, media, universities, and the social environment, as well as intermediate or contextual factors such as networks, culture, government institutions, human capital, the education system, and social capital (Hedayat et al., 2022). Radu (2023) focused on existing knowledge, technology, financial resources, and scientific advancement (Radu, 2023). Alkali (2021) highlighted the role of human resources, financial capital, organizational culture, capable management, laws and regulations, and proper planning (Alkali, 2021).

This research had several limitations, such as:

The study was conducted using a qualitative method; if it had been conducted as a mixed-methods study, the results would have had greater validity.

The time constraints of some experts led to a prolonged interview process.

The following suggestions are provided:

Conducting the research on a larger scale to increase the generalizability of the results, using a standard and comprehensive scale widely applicable.

Carrying out studies that examine the impact of macro-level policies and programs on strengthening the identified dimensions and components.

Conducting comparative studies in the field of the knowledge-based resistance economy for benchmarking in future research.

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

- Alem Tabrizi, A., Donyayi, T., & Shokouh Yar, S. (2022). Designing a sustainable business model in development banks with a focus on resilient economy. *Business Management Perspectives*, 21(50), 156-182. https://jbmp.sbu.ac.ir/index.php/article_102883.html?lang=en
- Alipour, Q., Kharashadi Zadeh, M. R., Seif, A. M., & Ahmadizadeh, S. S. R. (2020). Designing a strategic model for the role of elites and talents in achieving a knowledge-based economy with a resilient economy approach. *Journal of Strategic National Defense Studies*, 33-70. https://issk.sndu.ac.ir/article_1056_en.html
- Alkali, U. (2021). Development of university-industry interactions for knowledge-based economy in Nigeria. *International Journal of Technology Management & Sustainable Development*, 20(3), 265-284. https://doi.org/10.1386/tmsd_00045_1
- Fard, M., Kabaranzad, M. R., & Haghghat Monfred, J. (2021). Designing a model for developing digital entrepreneurship in small and medium knowledge-based companies with a focus on resilient economy policies. *Strategic Studies of Basij*, 24(90), 103-140. https://www.bsrq.ir/article_134398_en.html?lang=en
- Hedayat, D., Nadery, N., & Rezai, B. (2022). Designing a model for developing small and medium enterprises with an emphasis on the role of resilient economy. *Scientific Journal of International Business Management*. https://jiba.tabrizu.ac.ir/article_14815.html?lang=fa
- Kamiab, S., Rahimi Sershabdarani, Q., & Hosseini, M. S. (2023). Financing methods for sports clubs with a resilient economy approach under sanctions. *Sports Management Studies*, 108-124. https://smrj.ssrc.ac.ir/article_3540.html?lang=en
- Maleki, M., Ziaoddini, M., & Hadaei Nejad, M. (2019). Exploring the knowledge-based entrepreneurship model within the conceptual framework of a resilient economy. *Scientific Journal of Islamic-Iranian Progress Studies*, 7(14), 313-339. https://www.ipoba.ir/article_115489.html
- Musselin, C. (2018). New forms of competition in higher education. *Socio-Economic Review*, 16(3), 657-683. <https://doi.org/10.1093/ser/mwy033>
- Nasrabadi, D., & Mousavian, S. M. (2023). Strategic model for non-kinetic economic defense in achieving a resilient economy. *Defense Economy*, 8(28), 53-82. https://eghtesad.sndu.ac.ir/article_2570.html
- Phale, K., Li, F., Adjei Mensah, I., Omari-Sasu, A. Y., & Musah, M. (2021). Knowledge-based economy capacity building for developing countries: A panel analysis in Southern African development community. *Sustainability*, 13(5), 2890. <https://doi.org/10.3390/su13052890>
- Radu, M. (2023). Knowledge Economy: An Intangible Assets Based Economy. *Journal of Eastern Europe Research in Business and Economics*, 2023(2023), 906396. <https://doi.org/10.5171/2023.906396>
- Rahbar, F., & Nikchehreh, G. A. (2020). Developing knowledge-based resilient economy strategies. *Journal of Strategic National Defense Studies*, 4(31), 2-272. https://issk.sndu.ac.ir/article_1062.html
- Ranjbar Fallah, M., & Fatahi, H. (2024). Investing in start-ups in order to achieve a resilient economy and economic defense. *Journal of Investment Knowledge*, 13(49), 171-188. https://jik.srbiau.ac.ir/article_22042.html?lang=en
- Safarzad, H., Azma, F., Saeidi, P., & Aghajani, H. (2020). Proposing a commercialization model for knowledge-based products focusing on resilient economy policies. *Strategic and Macro Policies*, 8(29), 3-22. https://www.jmsp.ir/article_102269.html
- Ziyaei, M., Nikoomaram, H., & Hamadi, K. (2021). Designing a conceptual model for resilient economy in banks and financial institutions of the country. *Marketing Management*, 16(51), 1-28. http://journals.srbiau.ac.ir/article_17816.html