IJAAF; Vol. 7, No. 1, Winter 2023, Serial 22

Iranian Journal of
Accounting, Auditing & Finance

Ferdowsi University of Mashhad

Quarterly

RESEARCH ARTICLE

Designing Model and Levelization of the Factors Affecting Companies' Green Financing through Banking System

Abbas Ali Sheikh, Parviz Saeidi *
Department of Management and Accounting, Ali Abad Katoul Branch, Islamic Azad University, Ali Abad Katoul, Iran
Ebrahim Abbasi
Department of Management, Faculty of Social Sciences and Economics, Alzahra University, Tehran, Iran
Arash Naderian
Department of Management and Accounting, Ali Abad Katoul Branch, Islamic Azad University, Ali Abad Katoul, Iran

How to cite this article:
Sheikh, A., Saeidi, P., Abbasi, E., & Naderian, A. (2023). Designing Model and Levelization of the Factors Affecting Companies' Green Financing through Banking System. Iranian Journal of Accounting, Auditing and Finance, 7(1), 23-38. doi: 10.22067/ijaaf.2023.42194.1114.
https://ijaaf.um.ac.ir/article_42194.html

ARTICLE INFO

Article History
Received: 2022-09-31
Accepted: 2022-12-15
Published online: 2023-01-20

Keywords: Environmental Entrepreneurship, Grounded Theory, Green Financing, Interpretive Structural Modeling, Sustainable Development

Abstract

Creating businesses compatible with the environment and providing competitive advantages for companies. Banks are vital in creating ecological balance through economic growth and development of this type of entrepreneurship by considering the environmental risks through the companies' green financing. Taking into account the importance of the proper financing method in accomplishing the ideas of environmental entrepreneurs, the present research aimed to model the components affecting companies' green financing through the state banking system. This is mixed-method research. The first part included Grounded Theory (GT) and interviews with 36 experts selected through purposive and snowball sampling. After extracting 362 open codes, 77 subsidiary components and 21 principal components were identified. In the second part, 20 components with the highest code frequency were included, and by employing the interpretive structural modeling (ISM), the components' relationship and sequences were classified into 6 levels. The results of MICMAC analysis revealed that components of understanding the conditions and requirements of green projects plus setting green goals for the banks concerning their mission are pretty effective in implementing green financing as a crucial factor in accomplishing sustainable entrepreneurship and the emergence of clean industries.

https://doi.org/10.22067/ijaaf.2023.42194.1114

NUMBER OF REFERENCES
37

NUMBER OF FIGURES
3

NUMBER OF TABLES
5

Homepage: https://ijaaf.um.ac.ir
E-Issn: 2588-6142
P-Issn: 2717-4131

*Corresponding Author: Parviz Saeidi
Email: dr.parvizsaeedi@yahoo.com
Tel: 09113710735
ORCID: 0000-0002-9457-0949

1. Introduction

In recent years, green financing has been one of the new paradigms in financial discussions, including a wide range of sustainability issues related to banks and financial institutions (Zhang, 2020). Companies are increasingly interested in developing and implementing strategies that help them address environmental issues and pursue new opportunities (Hoque et al., 2019). This change of approach is considered to be environmental events around the world that have affected human life and infrastructure. As a result, pressures for long-term flexibility are increasing, and the focus is on environmental issues in economic terms. As a result, many countries have gradually begun to work on issues such as the green economy (Evans et al., 2019). Companies try to implement their social responsibilities in this area by taking measures for the environment and its preservation (Zimmerman, 2019). Green finance refers to economic activities that preserve and improve the environment and can deal with climate change and the optimal use of resources. In other words, investment, financing, project operation and risk management are projects aimed at protecting the environment, energy storage, clean energy, green transportation and green building services (Ao et al., 2020). In an age of high environmental risks and opportunities, options must be developed to adapt environmental issues to various loans and financing methods (Ng, 2018). Environmental entrepreneurship implies creating a business which reflects a concern for the environmental and social needs of the present and future generations, which can lead to the spread of environmental innovations and the emergence of green industries. The world's growing population faces limited resources, severe degradation, and biodiversity loss (Volery, 2002). Environmental change is one of the consequences of pollution and human behavior that is increasingly considered an important global issue (nor and Kasim 2015). Green financing combines environmental support and financial-economic benefits as a new project financing approach. This tool covers many users, including consumers, producers, investors, creditors, government and society. Contrary to traditional financing methods and patterns, the green financing model focuses on the benefit of the environment and its protective industries (Wang and Zhi, 2016). Pachaly (2012) defines environmental entrepreneurship as starting a new business in response to a recognized opportunity to profit and minimize environmental side effects (Pachaly, 2012). There is ample evidence that green financing policies and patterns positively impact the environment. Because this type of financing is an intermediary between environmental entrepreneurs and financial institutions and financing, in other words, it is believed that the allocation of budget and resources, as well as the lack of capital in the field of green investments, can be compensated by green financing (Baseri et al., 2019) as well as productivity, efficiency and effectiveness. Improved economic activities and paved the way for sustainable entrepreneurship. Companies need new decision-making tools to continue their economic life in a competitive environment (Abolmasoom et al., 2021). One of the essential things that can create a competitive advantage for companies is to pay attention to the issue of environmental protection and the production of green products, among which the entrepreneurial view of the environment and green financing approach is critical. Today, the development and prosperity of a large part of the economy of societies depend on the mechanisms by which new businesses are formed and developed (Calof, 2017). The banking industry and environmental requirements are closely related (ShahBandarzadeh et al., 2016) since green financing is a critical driver in environmental entrepreneurship and a key player in the emergence of green industries. This article seeks to present a new model of green financing for companies through the country's banking system and prioritize the factors affecting it. First, the theoretical foundations and research background are reviewed in the following. While explaining the methodology, the green financing model of companies through the banking system and prioritizing the factors affecting it are presented, and finally, the results, suggestions and Research limitations are presented.

2. Theoretical Framework

Entrepreneurship is a pillar of the socio-economic development of a country, and it has been well

proven that the level of economic growth of a region depends to a large extent on the level of entrepreneurial activities in that region (Ojha, 2016). The concept of environmental entrepreneurship incorporates identifying business opportunities and ways by integrating environmental management practices into the day-to-day operations of a typical business (Tandoh-Offin, 2009). In response to issues related to climate change and natural resource scarcity, efforts to transform the traditional economy into a sustainable one through a variety of green plans and programs are currently underway, one of which is and perhaps one of the most effective is the development of environmental entrepreneurship (Gevrenova, 2015; Koe et al., 2015). Entrepreneurship is an innovative and dynamic process in which a new entrepreneur is created, and the entrepreneur is a catalyst for change and creates employment opportunities for others. Entrepreneurial activities positively affect the natural environment and economic sustainability and consciously aim to ensure a more sustainable future. Green Entrepreneurship is a fast-growing entrepreneurship that focuses on businesses' environmental integrity and social impact to provide a competitive advantage to companies. Research on environmental entrepreneurship began in the last decade of the last century. (Gevrenova, 2015). Various authors and researchers have referred to this concept under different titles, such as green entrepreneurship, ecological entrepreneurship, sustainable entrepreneurship, etc. Environmental entrepreneurship is recognized as a branch of entrepreneurship with a future direction. One definition environmental entrepreneurship is defined as a system that transforms social and environmental businesses through the use of essential innovations (Isaak, 2002). Environmental entrepreneurship is a new strategy and tool for companies and provides an environmental monitoring mechanism to achieve sustainable use of environmental resources. Thus, the definition of environmental entrepreneurship encompasses a range of concepts, from adopting environmentally friendly business practices and green practices in entrepreneurial activities (Toyne, 2003) to creating value in innovations and products (Shaltegger, 2002). Green financing: Green financing is a process in which financial products and services are facilitated based on environmental conditions. Risk assessment is performed to meet sustainable environmental standards and avoid environmental risks. Innovative financial instruments that strive to improve ecological balance with economic growth play a key role in environmental protection (Volz, 2015). Pastakia (1998) cites the problem of financing for innovation by environmental entrepreneurs as a major obstacle to its development. The strategic goal of green financing is to consider the environmental risk management of projects in the provision of facilities. A comprehensive definition of green financing can provide the conditions for green financial services and products and a basis for stimulating green investment through the effects of reputation. Green financing and labeling of green financial products will help green companies and investors gain their reputation and encourage more green investment (Peng et al., 2018). As a country from which green concepts in the economic and financial spheres have originated, China has used community capital to stimulate and finance green industries by creating a green financial system (Otani et al., 2011).

Green financing and the development of environmental entrepreneurship: Innovations created by entrepreneurs are strategic factors in economic development. However, the available evidence shows that growth is not accompanied by nature conservation, and an increasing need for Environmental responsibility exists in entrepreneurship, or other words, environmental entrepreneurship (Volery, 2002). Development is a process of change and transformation during which society and the human system are moving towards creating a better and more humane society. Sustainable development includes studies of the environmental, environmental, and physical societies (Roy et al., 2009) and the changes that occur over the long term to maximize the well-being of present-day human beings without compromising the ability of future generations to meet their needs (OECD, 2001). The protection of non-renewable natural resources and the observance of the rights of present and future

generations are subject to the observance of sustainable development criteria. Sustainable development seeks to strike a balance between economic, social and environmental dimensions. According to many researchers, one of the effective factors in development is the existence of bank credit, increase in the amount and ease of access to it (Cuevas and Graham, 1988). However, green financing requires very high resources and budgets, and given that supporting environmental industries requires extensive investment, as well as the long-term recycling period of such investments; banks are considered the most important driver of green financing. The use of banking resources is essential for development and provides the capital economic actors need for new investments or the adoption of new technologies (Khandker and Faruqee, 2003). Because banks are an integral part of business and economic activities, they may affect the environment through corporate financing. In this regard, it is believed that banks should play the role and place of green governance in the green financing system. Bank credits also affect production, consumption and employment, imports and exports, and thus help to create growth and development in various aspects of services, industry and agriculture (Hozhabr Kiani and Sarlak, 2017) . In recent decades, a green economy has been identified as a strategy to achieve sustainable development and three main components: green growth, green financing, and green entrepreneurship have been defined for it (Qian, 2016). Economic development is impossible without capital, and capital has a vital role in the production process due to its ability to become other factors (Azad and Pourzamani, 2020). As part of green banking, green financing plays a significant role in the green industry and the green economy and is part of a global initiative to save the environment. The economic growth and development of any country depend on its productive activities. One of the main obstacles to the growth and development of any productive sector is the lack of capital and the lack of proper and principled use of available capital resources (Fadaeinezhad et al., 2021). On the other hand, green financing can be considered one of the levers related to the regulation and control of macroeconomics because the allocation of capital to environmental activities may affect society's demand as a whole and regulate the size, speed and structure of economic development. Therefore, financial instruments, incentives and institutions are needed for green financing to facilitate this process as an intermediary. These financial instruments include green mortgages, green car loans, venture capital investments, etc. (Cui, 2017). Therefore, since financial issues are a major obstacle to the development of environmental innovations, green financing can significantly help realise the ideas of green entrepreneurs and pave the way for sustainable development.

A review of the domestic literature indicates that so far, no research has been done directly and in the form of a model to study the issue of green financing. Very little research has been done theoretically. For example, Jafari et al. (2017) have studied green banking in the context of a green economy and based on library-documentary studies and have concluded that there is no explanation for the green financing model through the country's banking system. No serious action has been taken. On the other hand, a review of the background of foreign research also indicates that few studies have studied green financing empirically, and their focus has been more on seminars and international forums. Nevertheless, some research related to the subject of the present study is presented below. In a study, Zhang et al. (2020) studied the role of green financing in energy sustainability in China's construction industry. Their results showed that green financing helps to increase energy savings, reduce greenhouse gas emissions and subsequently to sustainable development in the construction industry. AbuJamie (2018) studied the economic impact of green financing on sustainable development with a descriptive approach. He concluded that green financing leads to economic growth, job creation and poverty reduction. Cui (2017) analyzed green financing incentives in China's banking industry in a study. With a panel approach and quantitative tests, he showed that the green loan ratio has expanded faster than other loans. The results also showed that the repayment of green

loans had reduced the overall risk of the bank's loan portfolio. In general, his conclusion was based on the fact that green financing is a type of investment with low risk and high demand. In their research, Wang and Zhi (2016) examined the role of green financing in environmental protection using market mechanisms and policy-making approaches. Using the market mechanism approach, they have shown that green financing leads to optimal capital flow management, effective environmental risk management and optimal resource allocation. Also, based on the policy mechanism, they believe that green financing reduces information asymmetry and moral hazard based on representation theory.

3. Research Methodology

Type and research method: This study aimed to design a model and level the components affecting the green financing of companies through the country's banking system. Hence, the research has a fundamental orientation because it seeks to extract components. Green financing of companies is through the banking system; on the other hand, it is an applied orientation because the results of this research can be applied to banks, upstream institutions, and environmental entrepreneurs. The research also has a combined approach, so that in order to conduct the first part of the research and present the model and explain the green financing process of companies (according to the results of the study on the background and limited previous studies) of the data method Oasis and Horus Foundation (GT) (1998) and in the next section, interpretive structural modeling (ISM) technique is used. The data method (data-based or context-based) is one of the well-known qualitative research methods. Researchers often resort to this method in which the subject matter of their study has been neglected or superficially considered in previous studies. A distinctive feature of this method is that theoretical propositions are not stated at the beginning of the study; rather, generalizations (theories) emerge from the data itself. The data creates a comprehensive map of people's experiences of a process phenomenon (Sarmad, Bazargan and Hejazi, 2021). The interpretive structural modeling approach is a method for examining the internal relationships of components and their effect on each other based on experts' opinions. Using this technique, the relationships and dependencies between the qualitative variables of the problem can be found. This method helps to establish order in complex relationships between the elements of a system and can level and prioritize the elements of a system. Statistical population, research sample and sampling method: The statistical population of this research consists of managers and experts of the banking network and university professors and experts in the field of green financing of companies, who use the available experts as a sample. The expertise of the interviewees in the present study has met one of the following two criteria:

1. Having an executive background in the field of banking and green financing, especially in the field of environment.

2. Possessing scientific and specialized knowledge of the environment and interacting with related executive bodies. This research has been done in two parts. In the first part (qualitative part), the data collection tool was an interview, and the recognition of experts by the researcher and snowball sampling method was the criterion for action. According to the saturation rule, 16 experts were interviewed. It was done while coding the concepts, linking and classifying the codes, and finally, the model was presented. Interpretive structural modelling has been used in the second part of the research (quantitative part). A questionnaire was used to finalize the identified components of green financing of companies and to rank and examine the conceptual relationship between the components. Questionnaires were sent to the same people interviewed in the previous step, followed by 12 completed questionnaires.

3.1. Validity and reliability

The validity and reliability of research tools are classified into two parts. In the qualitative section,

in order to increase the validity and validity of the categories, qualitative section interviews were conducted among individuals in different groups of the statistical community and the following controls were performed to ensure that the categories correspond to the meanings intended by the interviewees is:

• *Adaptation by the participants:* The participants reviewed the codings and expressed their views on it, and their views were applied during the coding process.

• *Review of non-participating experts:* Two experts reviewed the findings and commented on the coding. Participatory research: Participants were simultaneously assisted in analyzing and interpreting the data.

• *The researcher works in the country's banking network and has certainly benefited from his experience* compiling research. In the quantitative section, content validity was used to examine the validity. For this purpose, an interactive matrix questionnaire was used, and experts approved the contents of which in a qualitative stage. Since all the questionnaire items are based on the opinions expressed in the interviews and the questionnaire used was first reviewed by experts and based on the feedback received, the final questionnaire was developed to ensure its content's validity. This section uses the MICMAC (Infiltration Power-Dependency Matrix) matrix to measure reliability.

4. Findings

What are the green financing model of companies through the banking system and the leveling of its effective components? To answer this question, two methods and techniques have been used, one is the data foundation method, and the other is the structural interpretive technique, which is described below in the findings of each of these two sections: Findings of the qualitative part of the research. In this research, data analysis in the qualitative part is performed by the database method based on three types of open, axial and selective coding. This data was extracted through interviews with 16 banking and academic experts and specialists. The characteristics of the interviewees are given in Table (1):

Table 1. The Details of the interviewees

Row	Education	Field of Study	Job
1	PhD	Economy	Bank manager
2	PhD	Financial Management	Scientific staff
3	MA	Banking Science	Member of the board of the bank
4	PhD	Economy	Academic staff of the Monetary and Banking Research Institute
5	PhD	Rights	Member of Parliament - Economic Commission
6	PhD	Financial Economics	Former CEO of the Bank
7	MA	Accounting	Bank Credit Expert
8	PhD	Management	Credit Manager - Central Bank
9	PhD Candidate	Economy	Bank Credit Expert
10	PhD Candidate	Management	Bank Credit Expert
11	PhD	Financial Management	Member of the Board of Directors of the Bank
12	PhD	Financial Management	Former CEO of the Bank - Faculty - Deputy Minister
13	PhD	Agriculture	Bank manager
14	PhD	Management	Scientific staff
15	MA	Management	Bank manager
16	PhD	Management	CEO of the bank

Systematic procedures categories, characteristics, and data sets are given. At the beginning of the coding, it is possible to identify the categories from the open coding and help them relate to each other. After this, the relationship between the categories helps and, through the help, the categories, subcategories and their terms theoretical model. In this research and from the interviews, 362 open

codes, 77 concepts, and 21 categories have been extracted, which is part of the coding process presented in Table (2). A dedicated marker for each open source, for example, the A1B1 marker, indicates the first key point in the first interview.

Table 2. The part of the data coding process

Main Category (Selected Code)	Subcategory (pivot code)	Open Code Markers
The need to use the financial resources of banks to implement green projects	Green projects need extensive funding and investment	A2B23, A12B10, A8B12, A8B13, A6B9 A1B22A16B6, A15B5, A14B7
	The ability of banks to collect micro-deposits and allocate attracted resources	A2B10, A16B15, A16B5, A15B25, A1B5, A14B2, A12B2, A12B1, A1B1
	The need for a long-term repayment period of resources spent to create green projects	A10B13, A16B20, A16B1 A15B4, A15B19, A14B19, A4B13
The general popularity of green companies' products	The culture of using the products of green companies	A10B16,A14B20, A16B7, A12B5, A2B24
	Discounts and exemptions applied to consumers of green companies' products	A2B26, A16B1, A14B17, A15B13, A1B16
	Marketing and development of markets for selling green products	A1B7, A1B6, A1B13
Improving the EPI environmental index and paving the way for sustainable development	Improving the level of environmental health	A1B51, A8B8, A2B20, A3B15, A10B9, A10B1
	Infrastructure development	A1B20, A12B7, A12B8, A13B18 A4B9, A4B10, A14B5, A16B22
	Expand green projects and increase non-polluting products	A4B8, A1B71
	Applying new production solutions with the help of green technologies	A2B18, A5B7, A14B8, A16B19, A1B30

In the selective coding stage, 21 main categories were extracted among the items: causal conditions, contextual factors, intervention factors, strategies and consequences. By examining the five dimensions of the model and further abstracting these categories, a core category is as follows: A new financial paradigm in the path of sustainable development has emerged that can cover all other categories. Thus, after repeated reviews, obtaining corrective opinions, and making the necessary edits, the final model of green financing of companies was presented in the form of Figure (1).

4.1. Quantitative research findings

In the second part, to level the identified components affecting the green financing of companies while using the method of interpretive structural modeling, preparing a questionnaire, and the opinions of 32 experts (who are in the qualitative stage of the research). On the other hand, regarding the basis for selecting this number of elites, we should note that the basis for selecting the following components was:

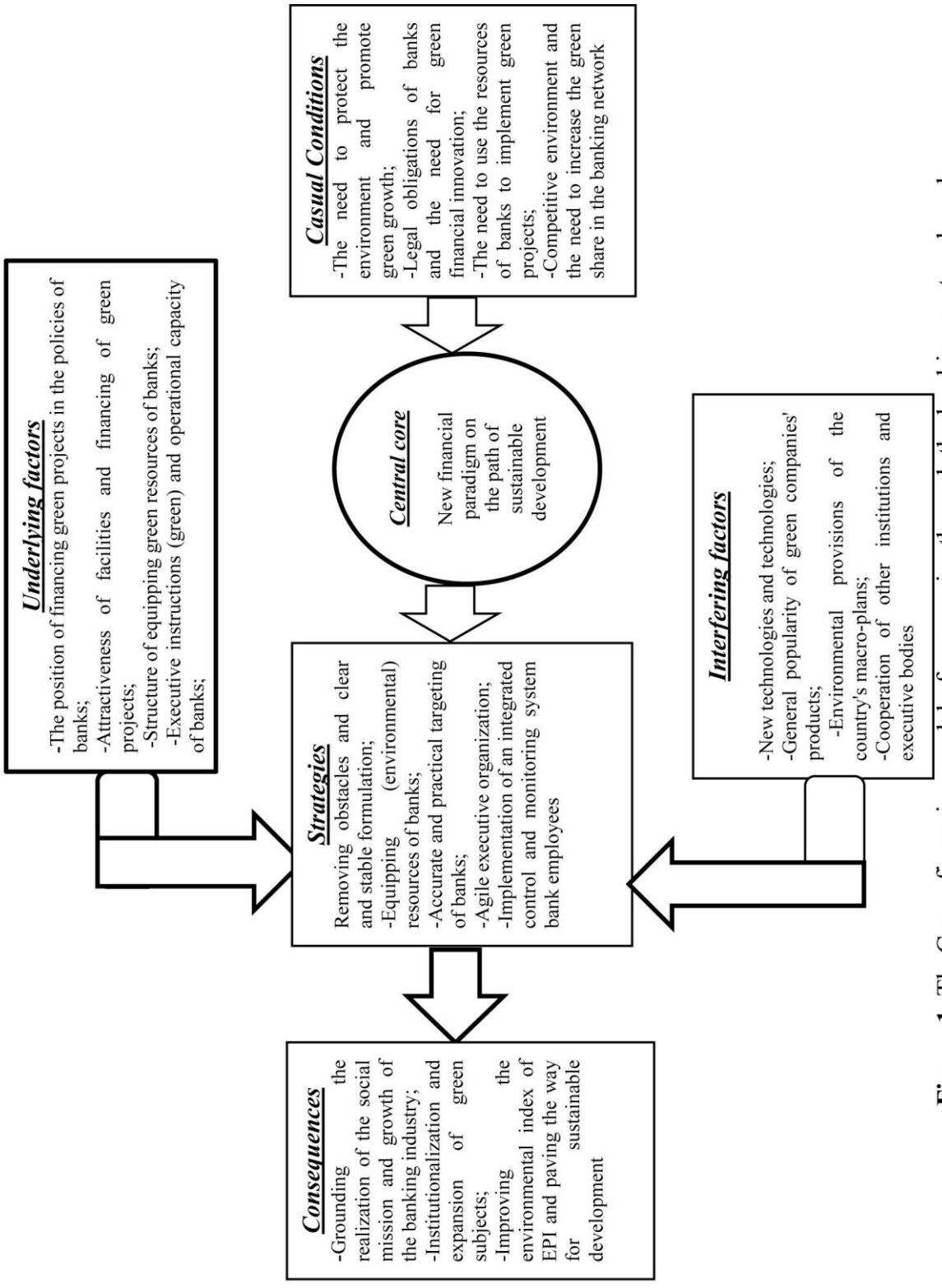

Figure 1. TheGreen financing model of companies through the banking system based on data theory

- Elites who have higher education in this regard;
- Elites who have had executive backgrounds in this regard;

-Elites who have written books or other research titles in this regard;

Elites who have been interested in participating and conducting interviews in this regard.
Elites who have been interested in participating and conducting interviews in this regard.

They have also been interviewed) and the components have been ranked. From the data process of the foundation, 77 components have been obtained due to a large number of components. These 20 components had a higher frequency of codes than the others as factors and indicators affecting the supply. Green finance Companies were selected through the country's banking system, which has been grouped using the ISM method to level and discover their relationships. The components are listed in Table (3).

Table 3. The Components affecting the green financing of companies through the banking system

Component number	Component
1	The amount of diversity in the products portfolio of banks to attract green deposits
2	Transparent environmental protection policy in the country's development programs
3	Green targeting of banks according to their mission
4	Strategic focus on preventing pollutants and environmental degradation
5	Dynamic planning and providing skilled manpower
6	Focus on promoting environmental health
7	Understand the current conditions and requirements of green projects
8	Alignment of banking laws with the green macro policies of the country
9	Appropriate financial resources and timely allocation of absorbed resources to green projects
10	The practical commitment of banks to the values and standards of society in preserving the environment
11	Public view on environmental protection and the desire to deposit green deposits in banks
12	Prioritize green financing schemes in banks
13	Special conditions for green projects and long-term return on investment
14	Motivational measures to increase employee empowerment
15	Evaluate the performance of banks in the field of financing green projects
16	The integrity of banks in announcing social duties and responsibilities
17	Top managers of banks look at the field of green financing of companies
18	Dividing long-term goals into medium-term and short-term green
19	Continuous monitoring of banks' green plans and effective legal proceedings
20	Apply special exemptions for green operating banks

To form a structural self-interaction matrix, each of the experts considers the criteria in pairs with each other and responds to the pairwise comparisons based on the following spectrum.

• V: The factor of row i causes the factor of column j to be realized.

• A: The factor of column j causes the factor of row i to be realized.

• X: Both the row and column factors cause each other to be realized (factors i and j have a two-way relationship).

• O: There is no relationship between the row and column factor. In the second step, the initial achievement matrix must be formed by converting the structural self-interaction matrices to zero and one. The following rule is used to do this:

• If the symbol of cell ij is the letter V, the number 1 is placed in that cell, and the number zero is placed in the symmetric cell.

• If the symbol of cell ij is the letter A, the number zero is placed in that cell, and the number 1 is

placed in the symmetric cell.

• If the symbol of house ij is the letter X, the number 1 is placed in that house, and the number 1 is placed in the symmetrical house.

• If the symbol of house ij is the letter O, the number zero is placed in that house, and the number zero is placed in the symmetrical house.

In order to perform a group ISM, we specify all the initial achievement matrices (resulting from the response of each expert) to the sum of the matrices obtained, then in equal or less than one-digit modes. We put zero, and in numbers larger than fashion, we put the number one. Once the initial achievement matrix has been obtained, its internal consistency must be established. For example, if factor 1 leads to factor 2 and factor 2 lead to factor 3, factor 1 must also lead to factor 3. If this state is not available in the matrix, the matrix must be modified, and such relationships must be modified. To be. This compatibility is added to the primary access matrix using secondary relationships that may not exist. The cells shown in Table (4) are the relationships created in the final access matrix.

Table 4. The final access matrix

Influence power	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	Component number
18	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	0	1	0	1	0	1	1	0	1	1	0	1	0	0	1	1	1	0	1	1	2
19	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	3
12	1	1	0	0	0	1	0	0	1	1	0	1	1	0	1	1	1	0	1	1	4
13	1	1	1	0	0	0	1	1	1	0	1	1	1	0	0	1	1	0	1	1	5
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
16	1	1	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	8
14	1	1	0	1	0	1	1	0	1	1	0	1	1	0	1	1	1	0	1	1	9
16	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	10
19	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	11
15	1	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	1	1	12
16	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	13
13	1	1	0	0	0	1	1	0	1	1	0	1	1	0	1	1	1	0	1	1	14
19	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	15
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
15	1	1	1	1	0	0	1	1	1	0	1	1	1	0	1	1	1	0	1	1	17
18	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	18
19	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	19
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20
	19	20	13	15	10	17	18	15	20	18	16	20	19	6	19	20	20	8	20	20	Degree of dependence

4.2. Determining the levels of components

In this step, we calculate each criterion's input (prerequisite) and output (achievement) criteria and then specify the common factors. In this step, the criterion has the highest output (achievement) equal to the common set. After identifying this factor or factors, we remove their rows and columns from the table and repeat the operation on the other criteria. Table (5) shows how to level the components.

4.3.Formation of an interpretive structural model

After determining the levels of each indicator and considering the final achievement matrix, an interpretive structural model is drawn. According to Figure (2), the ISM model of the research consists of 6 levels, the sixth level of which is the factor of knowing the current conditions and requirements of green projects is selected as the most effective level. This level directly affects the factors of the fifth level, i.e. criteria No. 3, 1, 15 and 16. The most affected level is the first level, which has 7 indicators, and all factors are affected.

Table 5. Leveling of components

Component	Achievement set	Prerequisite set	Subscription collection	Level
1	1-2-3-4-5-6-7^-8-9-10-1-12-13-15-16-17-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-3-4-5-6-7-8-9-10-11-12-13-15-16-17-19-20	1
2	1-2-4-5-6-9-1-12-14-15-17-19-	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-4-5-6-9-1-12-14-15-17-19	1
3	1-2-3-4-5-6-8-9-10-1-12-13-14-15-16-17-18-19-20	1-3-6-7-1-15-16-19	1-3-6-1-15-16-19	5
4	1-2-4-5-6-8-9-1-12-15-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-4-5-6-8-9-1-12-15-19-20	1
5	1-2-4-5-8-9-10-12-13-14-18-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-8-19-20	1-2-4-5-8-9-10-12-13-14-18-19-20	1
6	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-3-4-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-3-4-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	2
7	1-2-3-4-5-6-7-8-9-10--1-12-13-14-15-16-17-18-19-20	1-6-7-16-18-20	1-6-7-16-18-20	6
8	1-2-4-5-68-9-10-1-12-13-14-15-17-19-20	1-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-4-5-6-8-9-10-1-12-13-14-15-17-19-20	2
9	1-2-4-5-6-8-9-1-12-14-15-17-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-4-5-6-8-9-1-1-14-15-17-19-20	1
10	1-2-4-5-6-8-9-10-1-12-13-14-15-18-19-20	1-3-5-6-8-10-1-12-13-15-16-17-18-19-20	1-5-6-810-1-12-13-15-18-19-20	3
11	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-18-19-20	1-2-3-4-6-8-9-10-1-12-13-14-15-16-18-19-20	5
12	1-2-4-5-6-8-9-10-1-12-14-15-17-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-4-6-8-9-10-1-12-14-15-17-19-20	1
13	1-2-4-5-6-8-9-10--1-12-13-14-15-18-19-20	1-3-5-6-78-10-1-13-15-16-17-18-19-20	1-5-6-8-10-1-13-15-18-19-20	3
14	1-2-4-5-6-8-9-1-12-14-15-19-20	2-3-5-6-7-8-9-10-1-12-1314-15-16-17-18-19-20	2-5-6-8-9-1-12-14-19-20	2
15	1-2-3-4-5-6-8-910-1-12-13-14-15-16-17-18-19-20	1-2-3-4-6-7-8-9-10-1-12-13-14-15-16-19-20	1-2-3-4-6-7-8-10-1-12-13-14-15-16-19-20	5
16	1-2-3-4-5-6-7-8-9-10-112-13-14-15-16-17-18-19-20	1-3-6-7-1-15-16-18-19-20	1-3-6-7-1-15-16-18-19-20	5
17	1-2-4-5-6-8-9-10-12-13-14-17-18-19-20	1-2-3-6-7-8-9-112-15-16-17-18-19-20	1-2-6-8-9-12-17-18-19-20	4
18	1-2-4-5-6-7-8-9-10-1-12-13-14-16-17-18-19-20	3-5-6-7-10-1-13-5-16-17-18-19-20	5-6-7-10-113-16-17-18-19-20	3
19	1-2-3-4-5-6-8-9-10-112-13-14-15-16-17-18-19-20	1-2-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-2-3-4-5-6-8-9-10-1-12-13-14-15-16-17-18-19-20	1
20	1-2-4-5-6-8-9-101-12-1314-1516-17-18-19-20	1-3-4-5-6-7-8-9-10-1-12-13-14-15-16-17-18-19-20	1-4-5-6-7-8-10-1-12-13-14-15-16-17-18-19-20	2

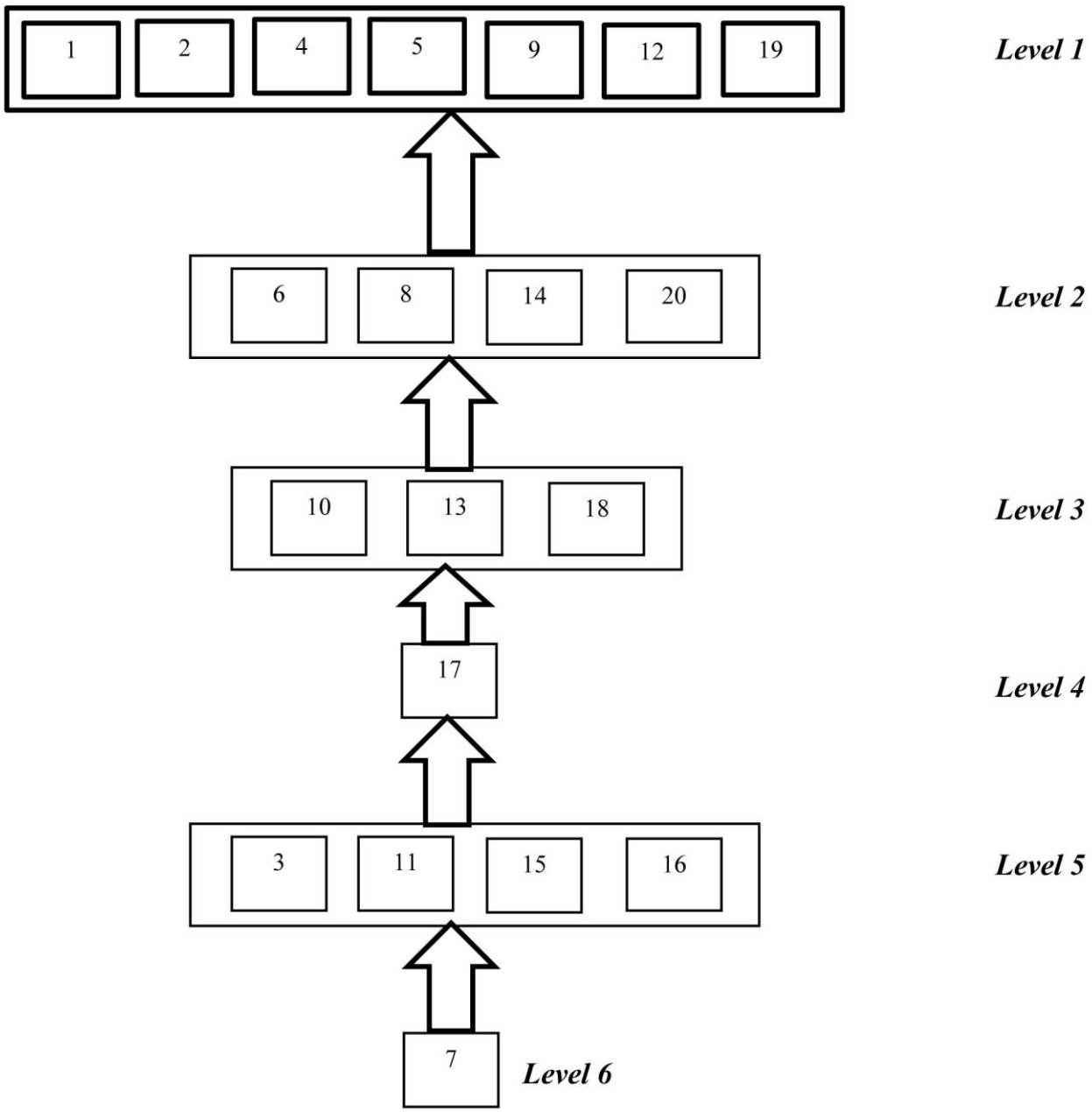

Figure 2. The Leveling of components

4.4. MICMAC analysis

Also, the research model can be shown in terms of penetration power and dependence in Figure (3). Criteria 3 and 7, i.e., green targeting of banks according to their mission and knowledge of the existing conditions and needs of green projects, are independent variables. These variables have low dependence and high conductivity; in other words, high effectiveness and low effectiveness are the characteristics of these key factors. The rest of the criteria are interface types. These variables have high dependence and high conductivity; in other words, the effectiveness of these criteria is very high. The only criterion number 16 is the honesty of banks in announcing their duties and social responsibilities, which has both the characteristics of independent criteria and the characteristics of interface criteria.

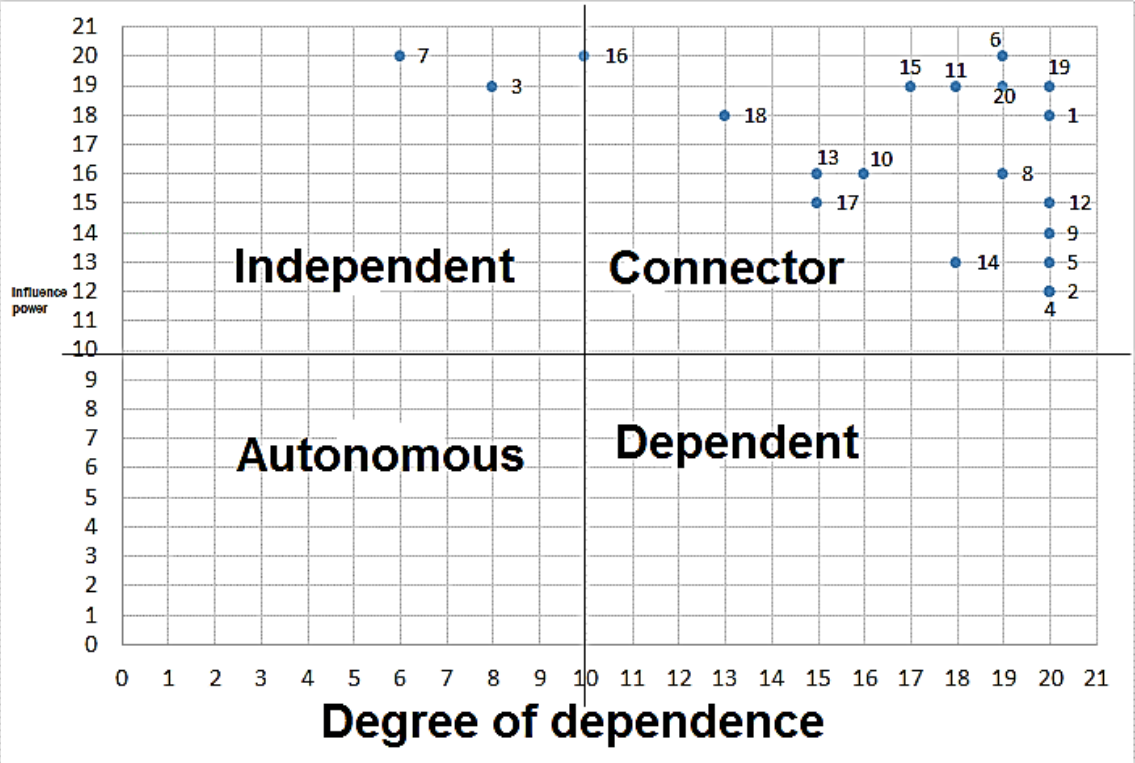

Figure 3. Influence-dependence power matrix

5. Conclusions and suggestions

Today, human beings are the biggest cause of environmental degradation and change, which is rapidly destroying natural resources as a factor of production in various ways, including unstable economic production. One of the most effective solutions to address environmental challenges is environmental entrepreneurship. There should be communication, cooperation and partnership between environmental businesses with relevant organizations and institutions, banks and other financing institutions to lead to better environmental management and the development of green innovations. Creating environmentally friendly businesses can be one of the main elements supporting a sustainable economy, a favorable social environment and ecological safety. Due to the special conditions of environmental projects, one of the main and constant problems facing entrepreneurs has been the issue of financing the implementation of such projects. Since banks can play a significant role in the development of environmental entrepreneurship due to the need to fulfill their social responsibility and with the new method of green financing, this study explores this important concern of entrepreneurs. And modeling and prioritizing the factors affecting the green financing of companies through the country's banking system has been discussed. In order to be aware of the opinions of managers and banking experts, university professors and experts to design and analyze the green financing model of companies through the banking system, a combined research approach has been used. In this study, qualitative data were collected in the first stage with the opinions and opinions of university professors, managers and banking experts. The researcher's goal was to discover a model for the successful implementation of the green financing model of companies through Iranian banks. The second stage is the necessary analysis in order to level the effective factors. The results of qualitative data analysis based on the GT data theory indicate that the need to protect the environment and promote green growth, the legal obligations of banks and the need for green financial innovations, the need to use banks' financial resources for the implementation of green

projects, competitive environment and the need to increase the share of green in the banking network have been influential factors and factors in developing a green financing model. Also, the results of identifying the background conditions in developing a green financing model on the financing position of green projects in banks' policies, the attractiveness of facilities and financing of green projects, the structure of equipping green resources of banks, instructions Emphasizes (green) and the operational capacity of banks and the knowledge and expertise of bank employees. Findings related to intervention conditions have also shown that new technologies and technologies, the general popularity of green companies' products, environmental provisions of the country's macro-plans, and cooperation of other institutions and executive bodies on the green financing process are among the components that influence strategies. Experts also believe that paving the way for the realization of the social mission and growth of the banking industry, institutionalizing and expanding green projects, improving the EPI environmental index and paving the way for sustainable development are among the consequences of the green financing process. The results showed that the removal of obstacles and the development of transparent and stable laws, equipping the financial (environmental) resources of banks, accurate and practical targeting of banks, agile executive organization and implementation of an integrated system of control and supervision, The title of strategies in the realization of the process of green financing of companies through the banking system is effective. Then, in the second stage of the research, the interpretive structural modeling (ISM) method was used to investigate the relationship and sequence between the components and present their structural model. Finally, based on experts' opinions and analyses, the final research model was calculated at 6 levels. Also, after MICMAC analysis, the types of each component were determined. The findings of this stage show that the components: recognizing the existing conditions and needs of green projects as well as green targeting of banks according to their mission are independent and key variables. , These variables have low dependence and high conductivity. This research, while compiling the green financing model of companies through the Iranian banking system, using the data method of the foundation, has also analyzed the designed model. It promotes environmental knowledge with a green financing strategy and promotes environmental culture. Undoubtedly, such a model is of great importance due to its extraction from the personal understanding of actors and stakeholders and can explain the dimensions. Green financing through the country's banking system effectively attracts environmental entrepreneurs to provide the necessary financial resources compatible with implementing their ideas and businesses.

References

1. Abolmasoom, M., Moshabaki Esfhani, A. and Naami, A. (2021). Providing an intelligent marketing model of the investment company Gostaresh Paya Sanat Sina, *Agricultural Economics Research*, 13(1), pp. 261-278 (in Persian). https://dorl.net/dor/20.1001.1.20086407.1400.13.1.12.1
2. AbuJamie, N. (2018). Financing Green Economy Impact on Sustainable Development, *International Journal of Business Administration*, 9(2), pp. 123-128. https://doi.org/10.5430/ijba.v9n2p123
3. Ao, H., Dupont-Nivet, G., Rohling, E. J., Zhang, P., Ladant, J. B., Roberts, A. P., ... and An, Z. (2020). Orbital climate variability on the northeastern Tibetan Plateau across the Eocene–Oligocene transition. *Nature communications*, 11(1), pp. 1-11. https://doi.org/10.1038/s41467-020-18824-8
4. Azad, A. and Pourzamani, Z. (2020) .Model of Company Efficiency with the role of Monitoring Criteria of CA Approach and LASOO, *Financial Economics Quarterly*, 14(53), pp. 65-96. https://doi.org/10.22069/JEAD.2020.15931.1354
5. Baseri, B., Abbasi, E. and Kiani, G. (2019). Financial effects of renewable energy development on

economic growth in Iran, *Financial Economics*, 13(46), pp. 161-182. https://doi.org/10.22069/JEAD.2020.15931.1354

6. Calof, J. (2017). Canadian competitive intelligence practices–a study of practicing strategic and competitive intelligence professional's Canadian members, *Foresight*, 19(6), pp. 577-589. https://doi.org/10.1108/FS-07-2017-0024
7. Cuevas, C. E. and Graham, D. H. (1988). Development finance in rural Niger: Structural deficiencies and institutional performance, *Economics and Sociology*, 1(3), pp. 58-68. https://doi.org/hdl.handle.net/1811/66297
8. Cui, Y. (2017). Analyzing Green Finance Incentives: An Empirical Study of the Chinese Banking Sector, *Ontario: the University of Waterloo*, 1(8), pp. 78-88. https://doi.org/10.3390/su10062008
9. Evans, M., Sha, Y., Roshchanka, V., Halverson, M., and Dai, F. (2019). Unleashing Energy Efficiency Retrofits through California: University of California. Working paper, Los Angeles, California. https://doi://hdl.handle.net/10012/12656
10. Fadaeinezhad, M., Osoolian, M., Shams, P. (2021). A Study of the Relationship between Cash Flow and Capital Structure, *Financial Management Strategy*, 9(3), pp. 61-78 (In Persian). https://doi.org/10.22051/jfm.2021.33007.2415
11. Gevrenova, T. (2015). Nature and characteristics of GreenEntrepreneurship, *Trakia Journal of Sciences*, 13(2), pp. 321-323. https://doi.org/10.15547/tjs.2015.s.02.068
12. Hoque, N., Mowla, M., Uddin, M., Mamun, A., and Uddin, M. (2019). Green Banking Practices in Bangladesh: A Critical Investigation, *International Journal of Economics and Finance*, 1(3), pp. 58-68. https://doi.org/10.5539/ijef.v11n3p58
13. Hozhabr Kiani, K., and Sarlak, A. (2017). Investigating the Impact of Information and Communication Technology on Capital Productivity and Total Factors of Production in Iran (Case Study: Large Industrial Workshops in Yazd Province), *Financial Economics*, 1(39), pp. 83-100. https://doi.org/10.22069/JEAD.2020.15931.1354
14. Isaak, R. (2002). The Making of the ecopreneur, *Greener Management International*, (38), pp. 81-91. https://doi.org/10.5539/ijef.v11n3p58
15. Jafari, K., Niyaki, A., Kazemi, M., Salimi, F., and Maleki, A. (2017). Environmental factors affecting the distribution of Ferula gummosa (Boiss) in northwest rangeland of Iran. *Africa Journal of Ecology and Ecosystem*, 4(3), pp. 258-265.
16. Khandker, S. R., and Faruqee, R. R. (2003). The impact of farm credit in Pakistan. *Agricultural Economics*, 28(3), pp. 197-213. https://doi.org/10.1016/S0169-5150(03)00017-3
17. Koe, W. L., Omar, R., and Sa'ari, J. R. (2015). Factors InfluencingPropensity to SustainableEntrepreneurship of SMEs in Malaysia.Global Conference on Business & SocialScience-2014, GCBSS-2014, 15th &16th December, Kuala Lumpur, *Procedia of Social and behavioral sciences*, 172, pp. 570–577. https://doi.org/10.1016/j.sbspro.2015.01.404
18. Ng, A.(2018). From Sustainability accounting to a green financing system: Institutional legitimacy and market heterogeneity in a global financial centre, *Journal of cleaner* production, (195), pp. 585-592. https://doi.org/10.1016/j.jclepro.2018.05.250
19. Nor, A. S. M., and Kasim, N. A. A. (2015). Blended learning web tool usage among accounting students: A Malaysian perspective. *Procedia Economics and Finance*, 31, pp. 170-185. https://doi.org/10.1016/S2212-5671(15)01144-2
20. OECD (Organization for economic cooperation and development). (2001). Entrepreneurship, Growth and Policy. Paris: OECD. Paris
21. Ojha, P. (2016). A study on Role of Entrepreneur in Socio Economic Development in India, *InternationalJournal of Multidisciplinary Research and Development*, 3(5), pp. 158-161. https://doi.org/10.5539/IJEF.V11N3P58

22. Otani, I., Fukumoto, T., and Tsuyuguchi, Y. (2011). China's Capital Controls and Interest Rate Parity: Experience during 1999-2010 and Future Agenda for Reforms, *Bank of Japan Working Pape*r. 10(2), pp. 75-94.https://doi.org/10.1108/09534819810212142
23. Pachaly, V. W.(2012). Barriers and Triggers to Green Entrepreneurship: An Exploratory Study, Thesis to obtain the degree of Master of Science in Economics and Business Economics, specialisation Entrepreneurship and Strategy Economics, *Erasmus University Rotterdam Erasmus School of Economics*. 6(5), pp. 57-73. https://doi.org/10.1108/09534819810212142
24. Pastakia, A. (1998). Grass-rootsEcopreneurs: Change Agents for a Sustainable Society, *Journal of Organizational Change Management*, 1(2), pp. 157-173. https://doi.org/10.1108/09534819810212142
25. Peng, H., Luo, X., and Zhou, C. (2018). Introduction to China's Green Finance System, *Journal of Service Science and Management*, 1(1), pp. 94- https://doi.org/10.4236/jssm.2018.111009
26. Qian, Y. (2016). Green Financing Challenges and Opportunities in PRC, United Nations, *Framework Convention Climate Change*. 40, pp. 47-68. https://doi.org/10.9774/GLEAF.3062.2002.su.00006
27. Roy, S., Pal, K., Anis, A., Pramanik, K., and Prabhakar, B. (2009). Polymers in mucoadhesive drug-delivery systems: A brief note. *Designed monomers and polymers*, 12(6), pp. 483-495. https://doi.org/10.1163/138577209X12478283327236
28. Sarmad, Z., Bazargan, A., and Hejazi, G. (2021). *Research Methods in Behavioral Sciences, Sixteenth edition*, Tehran: Agha Publications. Tehran, Iran (In Persian).
29. Shahbandarzadeh, H., Kabgani, M. H., and Shojaedin, S. N. (2016). Developing a Model and Quantitative Analysis of Monetary and Fiscal Services of Banks Based on Functional Aspects in Green Banking, *Financial Management Strategy*, 4(14), pp. 49-67. https://doi.org/10.22069/JEAD.2020.15931.1354
30. Shaltegger, S. (2002). A Framework forEcopreneurship: Leading Bioneers and environmental Managers to Ecopreneurship, *Greener Management International: The Journal of CorporateEnvironmental Strategy and Practice*, 38, pp. 45-58. https://doi.org/10.9774/GLEAF.3062.2002.su.00006
31. Tandoh-Offin, P. (2009). A Review of environmental Entrepreneurship as for Rural Development: the case for Ghana. Clemson University. Clemson, United States. http://dx.doi.org/10.2139/ssrn.1520669
32. Toyne, P. (2003). Corporate social responsibility – good business practice and a source of competitive advantage for SMEs? 48th World Conference International Council for Small Business: Advancing entrepreneurship and small business, Belfast, Northern Ireland. pp. 15-18. https://doi.org/10.1504/IJTM.2012.045792
33. Volery, T. (2002). Ecopreneurship: Rationale, current issues and future challenges. Radical change in the world: Will SMEs soar or crash, pp. 541-553.
34. Volz, U. (2015). Towards a Sustainable Financial System in Indonesia. Geneva and Washington, DC: UNEP Inquiry into the Design of a Sustainable Financial System and International Finance Corporation. 114, pp. 11-31. https://wedocs.unep.org/20.500.11822/9716
35. Wang, Y., and Zhi, Q. (2016). The role of green finance in environmental protection: Two aspects of market mechanism and policies, *Energy Procedia*, 104, pp. 31 – 316. https://doi.org/10.1016/j.egypro.2016.12.053
36. Zhang, M., Lian, Y., Zhao, H. and Xia-Bauer, C. (2020). Unlocking green financing for building energy retrofit: A survey in western China, *Energy Strategy Reviews*, 30, pp. 41-63. https://doi.org/10.1016/j.esr.2020.100520
37. Zimmerman, R., Brenner, R., and Llopis Abella, J. (2019). Green infrastructure financing as an imperative to achieve green goals, *Climate*, 7(3), pp. 39. https://doi.org/10.3390/cli7030039