

The role of innovation management in improving the financial performance of the company - case of Sonelgaz, Naftal –.

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Abstract

This study aims to show the role of innovation management in improving the financial performance of the company, where companies are experiencing rapid developments and intense competition in all areas, which has led them to seek a continuous search for improvement and development, and this by encouraging human resources to learn and increase creative output in various Its types, where researchers developed a questionnaire and analyzed it by SPSS program, the study resulted in several important results and recommendations, the importance of focusing on innovation to ensure competitiveness and success as one of the main factors to improve performance and achieve development .

Keywords : innovation management, financial performance, human resources; competitiveness development .

Jel Classification Codes : O16, L25.

1. INTRODUCTION

In the era of information revolution and knowledge society, creative thinking plays a crucial role in the development of countries and societies. Developed countries have achieved great success in all fields by using modern methods to develop innovation of their human resources. Individuals with outstanding talents and abilities enter the business world and achieve leadership and excellence by leading innovative companies that provide new and useful products and services to individuals and society, facilitating their work, and seeking to achieve quality by involving them in the process. This makes them more competitive and innovative.

Innovation is based on new ideas that aim to find effective and advanced solutions and tools. To develop innovation, an appropriate climate must be provided by valuing the work, achievements, and contributions of innovators, embracing and encouraging them, and providing moral and material incentives. This reflects positively on innovators and their companies by improving their performance, development, and success, and contributes to the economic and social development of countries. Innovation is the basis of knowledge and its embodiment, which makes it necessary to support the basic elements to strengthen and develop innovation in order to achieve improved financial performance of the company.

The research question is: What is the role of innovation management in improving the financial performance of the company?

The contributions of this study: to investigate the effective role of innovation management and investment in human capital in improving the financial performance of the company, which positively affects the development of products and services and activates the development process.

Study Objectives: The objectives of the study are to identify the role of innovation management, its elements and advantages, emphasize the interrelationship between innovation and performance management, and highlight the role of innovation management in improving the financial performance of the company through a field study of some Algerian companies.

Study approach: The study uses a descriptive approach to clarify the concepts related to innovation and its relation to performance and

development, and the analytical method to clarify statistics and explain the relation between the results and their analysis.

2. Theoretical Framework

2.1. Innovation management

A- Innovation can be defined as: “a combination of abilities, preparations and personal characteristics that, if an appropriate administrative environment is found, can promote mental processes to lead to original and useful products, whether in relation to the previous experiences of the human resource or the experiences of the company, society or the world, if the results are of the level of creative breakthroughs. in one of the fields of human life. (Amina Abdel-Qader Ali, 2015, p. 181)

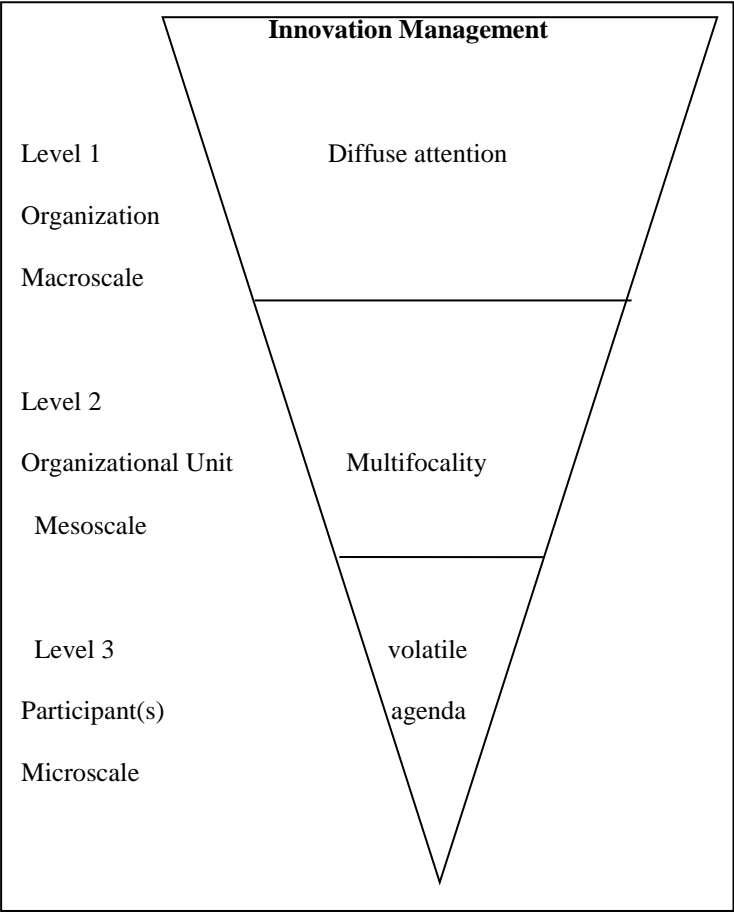
It considers the total efforts undertaken by the organization to develop new products, improve existing products, or develop new uses for them. (Taher Mohsen Mansour Al-Ghalbi, 2009, p. 33)

in 2009, the European Commission used the following definition: "Innovation is the ability to take new ideas and convert them more efficiently and quickly than the competition into business results through new processes, products or services " ; – in 2010, the OECD resumed the third edition of the Oslo Manual: “Innovation is defined as the implementation of a product (good or service) or a new or significantly improved process, a new method of marketing or a new organizational method in business practices, workplace organization or external relations : (Noailles, 2011, pp. 13-28).

- an innovation is the implementation on a macro-economic scale of a new technique, a new tool or a new organization, in the broad sense of these terms, making it possible to improve economic efficiency on a lasting basis overall of society. In summary, we will retain as a definition that: innovation is a sustainable improvement in the overall economic efficiency of society.

B- Managerial innovation can be seen as the creation and application of a practice, a process, a structure or a management technique renewed with regard to the state of the art in order to achieve new organizational objectives (Abir Besbes, 2013, p. 163)

Fig. (1): Three-level Structure of Innovation Management



Source: Fran Morente , Xavier Ferràs, 2017,p651

C - Types of innovation

Innovation has been classified into two types by some scholars. Jones classified them as follows (Khasawneh, 2011):

Radical innovation: This type of innovation involves introducing a completely new approach or method that is significantly different from previous innovations, with the aim of achieving a competitive advantage and a qualitative leap in the market. It is characterized by a complete departure from what came before.

-Incremental innovation: This type of innovation involves introducing a new product that is partially different from existing products through continuous improvements and additions to the traded products.

D- The cause of open innovation

Why is the open innovation model essential today? For the majority observers, this comes from the conjunction of several changes observed over the past three decades. First, technologies are more and more sophisticated, more and more complex products, which favors collaboration needs and division of labor. Operate in a closed mode and self-sufficient, assuming to be able to control the whole process itself, is thus increasingly complicated for companies. (Burger-Helmchen, 2013)

E - The characteristics of the organization and product/service innovation

The personal characteristics of entrepreneurs alone do not explain the innovative capacities of a small business . Organizational variables can also impact innovation. Among these variables, we have the financial resources of the company. Indeed, the literature has shown that innovation requires the deployment of financial capabilities sufficient.

For example, these resources are needed to support R&D activities, experimentation, surveys of potential customers or the testing and prototype phase. However, other more recent works show that the lack of financial resources could be a facilitating factor of innovation.

Thus with the advent of several approaches such as DIY, several studies show that the lack of resources could improve innovation (Walid NAKARA, 2019) .

F- knowledge society

The knowledge society is centered around human beings as the fundamental actors, recognizing them as the source of intellectual, cognitive, and material innovation. It represents a desirable goal for human development, promoting active participation in networks of exchange, communication, and interaction to influence, create, and benefit oneself and others. The new economic equation is no longer primarily dependent on the availability of natural or material resources, but on knowledge, competencies, and skills. (Nehme, 2011) .

-Axes of building a knowledge society

The main axes of building a knowledge society can be identified as follows: (Nasser Al-Din, Sofiane, 2015, p. 81)

These include the importance of education as a tool for achieving the goals of a knowledge society, along with the need for communication and media, a culture that promotes the values of a knowledge society, the development of human capital, and a high level of education.

It is also important to note that the mastery of information and communication technologies (ICT) plays a crucial role in the building of a knowledge society. However, there can be contradictions between certain objectives, such as the tension between the criterion of innovation and the need to address low-skilled audiences, who may not have access to the necessary resources or skills. (Ahmed, Asma, 2020, p. 789)

2.2. The relationship between innovation and the performance of companies:

A- Financial performance

The performance takes on its meaning when it is considered instrumentally. Thus we consider as "performance in the company everything which, and only what, contributes to the achievement of strategic objectives" and "performance in the company is therefore everything which, and only what, contributes to improving the value/cost ratio". (Malika AHMED ZAID CHERTOUK, 2011, p. 3)

-Financial performance can be defined as the survival of the company or its ability to achieve its objectives. With regard to costs, this performance is measured by quantitative indicators such as the profitability of investments and sales, profitability, productivity, return on assets, efficiency, etc. This economic and financial aspect of performance has remained for a long time the reference in terms of performance and business valuation. Even if it facilitates a simple reading of the management of the company, this financial dimension alone no longer ensures the competitiveness of the company.

According to Alfred Sloan (1963), financial performance is measured using indicators that measure, on the one hand, the economic profitability of the capital used by the company (the ratio between net operating income and capital invested) and on the other hand, the financial profitability of the capital contributed by the owners of the company (the ratio between net income and shareholders' equity). Today, a third ratio has been added, making it possible to measure the creation of value for the shareholder (the

ratio between the result operational and invested capital). (Herman et al, 2020, pp. 5-6)

B- The relationship between innovation and the performance

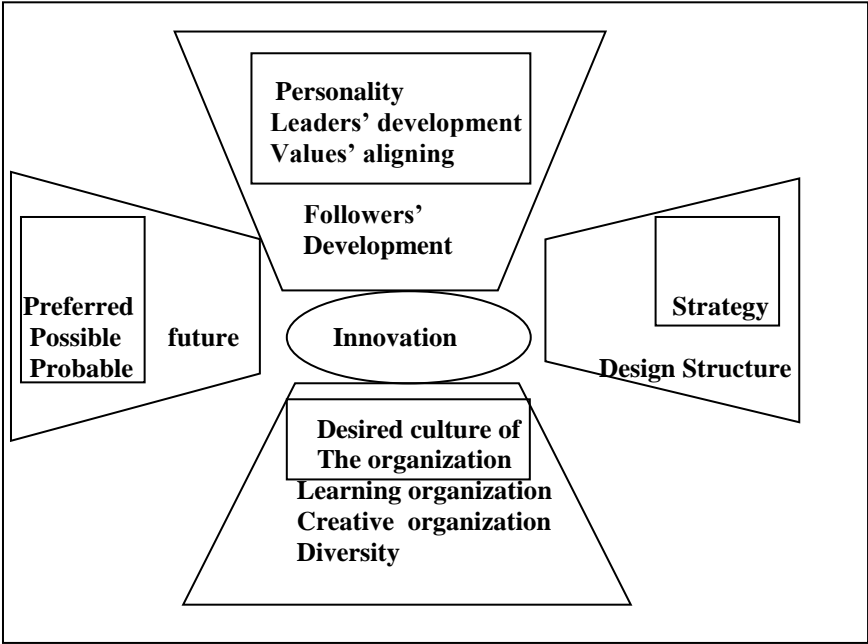
Implement a new or sufficiently improved production or distribution process with the aim of increasing efficiency and productivity. New developments in the field of information and communications technologies are considered one of the most important factors affecting the productivity of institutions, as they form the backbone of many new processes. (Farah et al, 2023, p. 102)

The traditional explanation for the positive relationship between firm-level innovation and its performance is based on the work of Schumpeter (1934). He believes that the introduction of new and innovative products into the market face limited direct competition, thus enable enterprises to achieve relatively high profits.

Many research studies have dealt with the relationship between innovation and business performance. (HABIBI & GUATI. , 2022, p. 350)

- The relationship between the dimensions of innovation and performance is also the subject of much debate in the literature: some authors highlight a causal link between the dimensions of innovation and performance, innovation would then be a determinant of performance that would influence it positively or negatively. Other authors believe that it is more of an “independence” relationship: successful companies are not necessarily characterized by a high degree of innovation, and vice versa. Finally, other researchers subscribe to a contingent approach and rather consider an “inclusion approach” where innovation would be one of the performance measurement criteria. (Michel, 2016, p. 68).

Fig.2. Innovation model to improve performance



Source: Rodrigo A. Zárate Torres 2011, p165.

3. Methods and Materials:

3.1. Study Methodology

- **Locational limits:** The study was carried out in two companies Sonelgaz, Naftal in Tlemcen
- **Time limits:** during the period 2017-2018 .
- **The sample size was 31 executives from the two companies.**

3.2. Study tools

The questionnaire consisted of 28 questions distributed on 3 axis are : Innovation , Innovation management, Financial performance

II-3- Reliability and Validity

Table 1. Observation processing summary

		N	%
Observations	Valid	31	100,0
	Excluded	0	,0
	Total	31	100,0

Source: Prepared by researchers based on SPSS.V21

Table2. Reliability Statistics

Alpha Cronbach	Number of elements
,844	28

/VARIABLES=innovation management financial performance

Source: Prepared by researchers based on SPSS.V21

A test of the degree of reliability of the "Reliability Analysis" tool was carried out by calculating the value of the " Alpha Cronbachs " coefficient. It reached 84.4 and the validity ratio reached 91.8. This indicates that the questionnaire has a good coefficient validity and reliability adapted to the needs of the research.

Table3. The gender of the sample.

	Effectives	Percentage	Cumulative percentage
Valid male	16	51,6	51,6
female	15	48,4	100,0
Total	31	100,0	

Source: Prepared by researchers based on SPSS.V21

From the table, we notice that there is a similar ratio between the genders in the studied sample; it is close to 51.6 for males and 48.4 for females.

4. Results and discussion :

4.1.Descriptives statistics

We use the five-point Likert scale, which included the following degrees of use: (1) strongly disagree, (2) disagree, (3) somewhat agree, (4) agree, and (5) strongly agree

Table4. Descriptive statistics

	N	Min	Max	Mean	Standard deviation
Human resources are characterized by the ability to deal with and use information.	31	1	4	2,26	,729
The institution owns unique human resources that make the difference	31	1	4	2,77	,884

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I have the ability to present new ideas and solutions to work methods.	31	1	4	2,35	,839
I have the ability to suggest quick solutions to face work problems in different circumstances.	31	1	5	2,48	,926
I have the ability to provide new ideas for business development easily and automatically	31	1	4	2,35	,798
I develop plans and solutions to face work problems that may occur.	31	1	4	2,39	,844
I have the ability to understand and explain the relationship between the results and the causes that led to them.	31	1	5	2,35	,877
New ideas gain importance and acceptance in the organization.	31	1	5	2,97	1,224
The organization determines the size and quality of the human resources it needs in the future	31	2	5	2,97	,983
There is a well-defined program for evaluating the performance of human resources on a periodic and continuous basis	31	2	5	3,13	,885
All human resources at all levels benefit from the training process in order to develop and develop them.	31	2	4	3,06	,854
The organization depends on developing a flexible wage strategy commensurate with the standard of living to preserve human resources and increase their loyalty	31	2	4	3,19	,749
The institution grants special rewards to human resources distinguished in performance in order to raise their morale, abilities and skills.	31	2	5	3,16	1,003

The organization works to provide and improve suitable working conditions to increase job satisfaction for human resources.	31	2	5	3,03	,948
The Foundation organizes periodic meetings and seminars to present experiences and expertise in order to reach effective decisions.	31	2	4	3,00	,775
The institution is interested in its human resources to provide ideas and suggestions.	31	2	4	3,19	,749
The organization provides communication technology to transfer information and use it quickly and flexibly.	31	1	4	2,58	,923
The administration adopts a policy of improvement by attracting human resources with creative orientations.	31	2	5	3,19	,792
The Foundation cooperates and communicates with universities and research centers as an important source for increasing innovation.	31	2	5	3,61	,844
Senior leaders in the organization put ideas on human resources for discussion and adopt their targeted suggestions.	31	2	5	3,29	,783
The organization's communication style is characterized by openness at all administrative levels	31	1	4	3,06	,892
The Foundation has means for expressing opinion and dialogue such as the Foundation's magazine, a register or the Complaints and Suggestions box.	31	1	4	2,74	1,094
Creations and innovations in the organization are valued financially and morally.	31	2	5	3,61	,882

The Foundation works on developing and consolidating a culture of innovation.	31	2	5	3,32	,909
The organization is working to grow the sales volume of its existing and new products to increase market share and generate cash flows.	31	1	3	2,00	,683
The Corporation seeks to apply modern financial instruments in line with changes in the market.	31	1	4	2,52	1,061
The institution evaluates its financial profitability to know its most profitable activities periodically.	31	1	4	2,26	,855
Financial balance is one of the most important financial indicators that the institution seeks to achieve.	31	1	4	2,13	,670
N	31				

Source: Prepared by researchers based on SPSS.V21

Table5. Descriptive statistics of Questionnaire axes

	N	Min	Max	Mean	Standard deviation	Variance
innovation	31	1,00	3,88	2,4919	,57909	,335
Innovation management	31	2,00	3,88	3,1351	,43664	,191
Financial performance	31	1,00	3,50	2,2258	,70224	,493
N	31					

Source: Prepared by researchers based on SPSS.V21

Through the table, it is clear to us that the results of the sample about innovation came at a rate of 2.4919 and that the financial performance rate was at 2.2258, indicating that a weak percentage.

As for the innovation management rate of 3.1351, it is an average rate.

Table6. Correlations

		innovation	Innovation management	Financial performance
innovation	Pearson Correlation	1	,439	-,029
	Sig. (bilateral)		,013	,878
	N	31	31	31
Innovation management	Pearson Correlation	,439	1	,278
	Sig. (bilateral)	,013		,130
	N	31	31	31
Financial performance	Pearson Correlation	-,029	,278	1
	Sig. (bilateral)	,878	,130	
	N	31	31	31

Source: Prepared by researchers based on SPSS.V21

Table 6 illustrates the correlation shows that there is a significant relationship between innovation management and innovation as the P-Value (0,013) is below (0.05), and as for the relationship between innovation management and financial performance there is no relationship due to the perceptions of the respondents as the P-Value(0.130) is above (0.05).

Table7. Summary of models

Model	R	R-2	R-2 adjusted	Standard error of the estimate
1	,278	,077	,045	,68616

Source: Prepared by researchers based on SPSS.V21

Table8. ANOVA

Model	Sum of Squares	Ddl	Mean squares	F	Sig.
1 Regression	1,141	1	1,141	2,423	,130

Residue	13,653	29	,471		
Total	14,794	30			

Source: Prepared by researchers based on SPSS.V21

Table9. Coefficients

Model	Non standardized coefficients		Non standardized coefficients	t
	A	standard error	Bêta	
(Constant)	,826	,908		,909
1 Innovation management	,447	,287	,278	1,557

Source: Prepared by researchers based on SPSS.V21

Table10. Coefficients of Innovation management

Model	Sig.
(Constant)	,371
1 Innovation management	,130

Source: Prepared by researchers based on SPSS.V21

DESCRIPTIVES VARIABLES=innovation- innovation management-financial performance.

/STATISTICS=MEAN STDDEV VARIANCE MIN MAX.

The significance level Sig = 0.130 is above 0.05 and therefore there is no statistically significant relationship between innovation management *and* financial performance.

Differences in the value of the company's performance resulting from the variation of other factors.

Conclusion:

Through our study, it was found that innovation is necessary for the success and sustainability of institutions innovation and financial performance of the companies studied were weak.

The management of innovation in the companies studied is average

There is a significant relationship between innovation management and innovation in the companies studied.

Innovation management does not affect the financial performance of the companies studied but it is influenced by other variables.

Recommendations:

There is a need to increase innovation in companies that prioritize critical thinking.

The use of modern communication technologies should be emphasized in companies.

Human resources should be recognized as a real and lasting wealth for companies.

Information and communication technologies should be introduced in various fields.

Attention should be given to innovation as an entry point to achieve sustainable development.

Human resources should be trained to multiply their innovations.

Focusing on financial performance is an important tool to achieve profitability for a company

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