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Innovation in startups according to their sector of activity, a case study of several institutions

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Abstract

The scientific article addresses the topic of innovation in startups, focusing on a theoretical aspect that includes key definitions of innovation concepts and its types. It also involves a practical study with a significant analytical questionnaire.

The article delves into the challenges and opportunities faced by these companies in the context of innovation, Innovation are a fundamental element in the entrepreneurship of startups, contributing to their distinctiveness and success. Additionally, it presents survey results as a means to analyze the level of adoption and interaction with innovation concepts within the field of its production.

Keyword: innovation, startups, field of production, analytical questionnaire.

Code jel: M 12, M 19, M 50

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1. INTRODUCTION

The ever-evolving economic landscape has led to the creation of a burgeoning start-up ecosystem, with each start-up trying to stand out by innovating, while also adapting to its particular sector.

Innovation acts as a critical engine of growth for start-ups, driving a dynamic that shapes their success. Each new institution turns to a type of innovation that matches its business model, depending on its sector, as noted by various authors, including J. Schumpeter. Innovation takes on various forms, enabling start-ups to be on the cutting edge of new technologies and to create new markets, challenging established ones while creating an environment that encourages creativity.

Innovation is abundant, enabling startups to grow rapidly and stay competitive in the emerging market.

This research aims to address the following question:

How does a startup's sector of activity impact their choice of innovation?

To address this central issue, we formulated the following two hypotheses:

H1: Innovation ensures leadership for startups.

H2: The adopted innovation varies according to the sector of activity of startups

The research objectives are as follows:

- Identify the correlation between the type of innovation adopted by startups and their sectors of activity.
- Evaluate how well startups adapt their innovation strategies to their respective sectors of activity.

Through this research question, we aim to identify the relationship between the type of innovation chosen by startups and their sectors of activity by highlighting various dimensions of innovation to understand the innovation strategies adopted by startups.

This study is divided into two parts. The first is dedicated to a literature review revolving around key concepts related to our research, namely the types of innovation based on the sector of activity of startups and their roles in the growth and success of these companies. Meanwhile, the second part presents the results of the survey we conducted among entrepreneurs by administering a face-to-face questionnaire, and the findings were analyzed using SPSS.

2. Introduction to the concept of innovation

Innovation results from both a new idea, requiring creativity, and a tangible realization that responds to consumer expectations.

2.1. Definition of the concept of innovation:

Numerous business experts emphasize the vital importance of innovation as a means for companies to survive and resist against a hostile and highly competitive environment. What is innovation? It is a multi-stage process through which organizations transform an idea into a product, service or process, which may be new or enhanced (OECD, 2018). To establish a difference and compete against other actors in the market, companies must present innovation as new to the consumers.

Several authors have contributed to the definition of innovation, below are the most relevant:

Joseph Schumpeter defines innovation as the process of creative destruction, where new ideas and technologies replace old ones, fueling economic growth (Joseph Schumpeter and Richard Swedberg, 2021).

Peter Drucker sees innovation as the specific tool used by entrepreneurs to exploit change as an opportunity for a different business or service (Peter Drucker, 2006).

Clayton Christensen puts forward the theory of disruptive innovation, where new entrants introduce less sophisticated but more accessible products and services, thus disrupting the established market (Clayton Christensen, 2013).

Henry Chesbrough advocates for the concept of open innovation, urging companies to look outside their organizational boundaries for new ideas and partners to stimulate innovation (Henry Chesbrough, 2006. P98).

Eric Von Hippel emphasizes user innovation concept and highlights the importance of end-users in the innovation process as a source of novel and innovative ideas.

These various perspectives demonstrate the complexity of the innovation concept in different contexts and fields.

2.2. Different types of innovation:

There are multiple types of innovation that we have deemed it necessary to classify into three categories, recognizing that each type can impact a institution and contribute to its long-term growth.

2.2.1. Based on the nature of innovation:

According to the Oslo Manual, we can primarily classify innovation into four

types (OECD, 2018, the Oslo Manual - 4th edition):

Innovation Process: A process innovation is the implementation of a new or significantly improved production or distribution method. This concept involves important changes in techniques, hardware, and/or software.

Product Innovation: A product innovation involves the introduction of a new or significantly improved good or service in terms of its characteristics or the use for which it is intended. This definition includes substantial improvements in technical specifications, components and materials, integrated software, user-friendliness, or other functional characteristics.

Marketing innovation: A marketing innovation refers to the implementation of a new marketing method that involves significant changes to product design or packaging, placement, promotion, or pricing.

Organizational innovation: Organizational innovation involves the adoption of a new organizational method in the practices, workplace organization, or external relationships of a firm.

2.2.2. Based on the degree of innovation:

There are mainly three types:

Incremental/Continuous Innovation: This type of innovation involves making gradual and continuous improvements to existing products, services, or processes (J. Schumpeter and Richard Swedberg, 2021). It is an evolution of what already exists and does not involve radical changes.

Radical/Disruptive Innovation: This type of innovation introduces significant and revolutionary changes that challenge existing norms (Clayton Christensen and Michael Raynor, 2013). It may transform an industry or a sector.

Disruptive Innovation: This type of innovation disrupts established markets by offering a less expensive or more user-friendly alternative, initially targeting niche or neglected market segments (Clayton Christensen, 2011). It can create new markets and shift market share from incumbents to new entrants.

Disruptive innovation: A specific type of radical innovation that disrupts established markets by offering a cheaper or simpler alternative, initially targeting ignored market segments (Clayton Christensen, 2011).

2.2.3. Based on their origin/source:

We can essentially differentiate two types: Techno-push innovation (Joseph Schumpeter and Richard Swedberg, 2021): Originating in scientific or technological

discoveries, such as the emergence of laser lighting in the automotive sector, these innovations can be very forward thinking and not always aligned with consumer expectations, resulting in commercial failure.

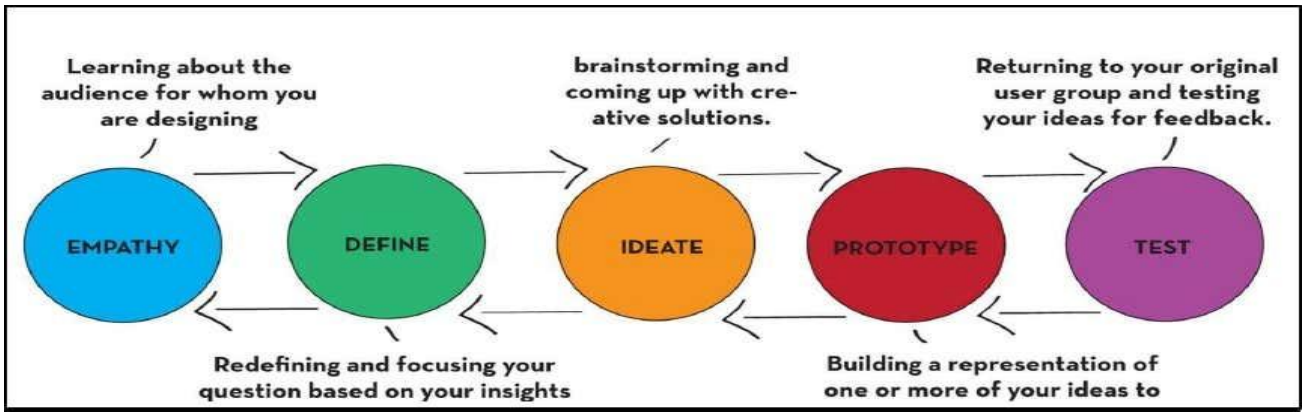
Market Pull Innovations (Eric Von Hippel, 2006): these are innovations that organizations develop based on understanding the needs and shortcomings of users. For example, PSA Peugeot Citroen's Chrysalide concept offers a new well-being experience in the car by synchronizing different vehicle features, like interior lighting, heated seats, and fragrance diffusers. These innovations, unlike previous ones, tend to have better commercial success.

Companies can use one or more types of innovation to develop or improve their products and services, depending on their environment and the evolving needs of their customers.

2.3. The Emergence Process of Innovation:

From the time of Schumpeter to the present day, the innovation process has evolved from a linear process proposed by Schumpeter to the new process called open innovation. In our study, we will focus on open innovation, which emphasizes how organizations develop their innovations from the idea to the launch of the innovation by involving users in the process.

Figure (01): The model is defined as follows



Source : Henry chesbrough, open innovation : the new impertative for creating and frofiting from technology, Harvard Business Review Press, 2006, P98.

Open innovation, first introduced by (Henry Chesbrough, 2006), is a process where external actors are engaged to generate and develop ideas. The following are the essential steps in the open innovation model:

1. Identifying needs and opportunities: identifying areas or potential solutions are necessary, both internal and external to the organization.

2. Inbound innovation: obtaining ideas, technologies, or solutions developed external to the institution. This can be achieved through partnerships, acquisition, licensing, or working with universities or start-ups.
3. Internal development: taking external ideas and transforming them into innovative products, services, or processes within the organization.
4. Outbound innovation: sharing or licensing internal ideas that may not align with the institution's core business but could be valuable to others.
5. Marketing: launching innovations into the market through partnerships or joint marketing efforts.
6. Feedback and continuous improvement: receiving feedback from the market and external partners and using this information to enhance and adjust products or processes.

The open innovation model encourages collaboration and cooperation with external parties, acknowledging that innovation is not limited to an organization's internal resources. This allows for a more flexible and responsive approach to rapid changes in the business environment.

3. Overview on Sectors Activities of Start-up:

The study of the development stages of innovative growth companies (start-ups) is a critical issue for all economies, as these companies represent significant potential in terms of job creation and support for economic growth (Jean-Pierre Boissin, Frédérique Grazzini, Caroline Tarillon, 2019. P21-59). However, how do we define a start-up?

3.1. Definition and Characteristics of Start-ups:

Steve Blank defines a start-up as "the transitional phase of a institution searching for its repeatable and scalable business model" (Hervé Lebret, 2019).

Based on this definition, we can assume that a start-up is synonymous of youth and rapid growth.

Among the characteristics of a start-up:
- Innovative: focused on new and innovative ideas.
- Rapid growth: strives for quick revenue expansion
- Scalable business model: seeks a model that enables rapid growth while adapting to its surroundings.

It should be noted that the aforementioned characteristics may vary among startups, yet they often denote the same essential elements.

3.2. Typology of Startup Activity Sectors:

Startups can be classified into different sectors of activity depending on the industry in which they operate. Below are some common categories of startups and their sectors (Philippe Engelbert, 2021. P16):

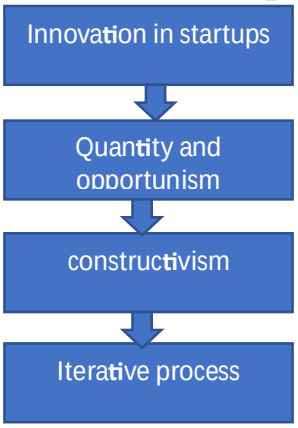
1. Technology and Big Data: Startups focused on developing software, applications, online services, and digital data analysis.
2. Biotechnology and Health: Innovative startups in health, biotechnology, and the life sciences.
3. E-Commerce: Startups that operate e-commerce and retail platforms.
4. Energy and Environment: Startups created to develop sustainable energy solutions and clean technologies.
5. Finance and Fintech: Innovative startups in financial services, electronic payments, and digital services.
6. Food and Agrotech: Startups created to develop innovative agricultural solutions and supply-chain management etc.
7. Tourism and Leisure: Startups providing novel solutions in the tourism and travel sector.
8. Education: Startups developing online educational solutions and learning platforms, among others.

In each of the sectors listed earlier, every startup employs one or more of the innovation types presented in the first part of this study. If we look at the tourism service sector, we will see that startups rely on Product/Service innovation, much like the fintech sector. Conversely, in the e-commerce sector, we will find that Process/Procedure innovation is the most commonly used, with Amazon being the prime example.

3.3. Innovation in Startups:

According to some authors, the innovation process in startups is more like plant reproduction - ideas are plentiful, scattered in all directions, but few actually result in innovations. Every day, new ideas, products, and startups are born and die. It's a strategy based on quantity and opportunism. Le Masson, P., Weil, B., & Hatchuel, A. (2006).

Figure (02): Innovation process



Source: Diagram developed by ourselves

The innovation process begins with an understanding that reality is a socially constructed and relative phenomenon that varies depending on space and time. As such, the problem is not viewed as something that necessarily precedes the solution, but rather is co-constructed alongside it in a collaborative manner. This is realized within institution through iterative and circular processes (Le Masson, P., Weil, B., & Hatchuel, A. (2006)), characterized by great flexibility and ability to re-examine assumptions. Compared to large companies that invest enormous sums upfront, investment in the early stages of the process is lower (Midler, C., Beaume, R., & Maniak, R. (2012). Most contemporary design movements, such as agile development (Beck et al., 2001), design thinking (Cross, 2011), or lean startup (Ries, 2011), align with this paradigm.

4. Presentation and analysis of study data, and discussion of its results:

The aim of this study is to understand the current use of innovation in startups, and to identify the contribution that innovation makes to achieving leadership in the startup sector. Additionally, the study aims to explore the most important fields of innovation for startups, and to determine whether there are significant differences in the opinions of respondents about their field of activity, based on their personal and job-related variables. Fifty surveys were distributed to startup institutions, and 37 were retrieved. Out of these, 35 surveys were accepted, while two were rejected. These results indicate that 70% of the institutions (start-up) expressed willingness to participate and collaborate through surveys, with a few declining. The accepted surveys could provide valuable insights into the needs and challenges of these startup institutions.

To achieve these goals, the study focuses on answering the following questions:

Hypotheses:

Hypothesis 1: Innovation is a key driver of leadership for startups.

Hypothesis 2: The type of innovation adopted by startups varies according to the nature of their business activity.

Analysis and Discussion of the First Question: The startups' use of innovations.

To answer the first question and understand the status of startups' use of innovation, the researcher conducted both descriptive and statistical analyses of the data by means of frequencies, percentages, standard deviation, and arithmetic means. Moreover, a statistical test (chi-square) was carried out for matching the five responses of the study sample's respondents.

- **Axis one:** using start-ups to innovate

Table (01): The respondents' answers to the statements related to

Number	Statements	Response						Arithmetic average	Standard Deviation	The value of the statistic Chi-square	Significance level	Order
			Strongly disagree	Disagree	Neutral	agree	strongly agree					
1	The institution relies on innovation in the production of goods	No.	0	13	7	**14**	1	2,914	0,951	12,429	0,006*	1
		%	0	37,14	20	40	2.86					
2	relies on innovation in	F	0	12	4	**19**	0	2,8	0,933	9,657	0,008*	3

4	5		2		6								
0,000*	0,000*		0,029*		0,003*								
15,486	27,457		9		11,371								
0,95	0,236		0,868		0,639								
2,743	2,057		2,8		2,057								
0	0	0	0	0	0	0	0	0	0	0	0	0	0
34,29	0	0	22,86	0	0	0	0	0	0	0	0	34,29	%
5,71	5,71	2	40	14	22,86	8	11	2	8	11,43			
60	94,29	**33**	31,43	**11**	60	**21**				54,29			
0	0	0	5,71	2	17,14	6	0						
%	%	F	%	F	%	F	%						
The institution relies on ICT for its innovation	The institution has its own innovation that distinguishes it from its competitors in the market		The institution trains employees on good control of the institution's innovation		Employees are cognizant of the values of innovation in the institution								
6	5		4		3								

	0,763	2,562	Overall arithmetic average

* Significant differences at the level of (0.05) or less

Source: the SPSS26 program outputs are placed in the annexes

The above table indicates that the majority of data is concentrated around the "agree" response. The weighted arithmetic mean is used as a criterion for determining the axis result (which is the sum of means divided by the number of sub-questions in the axis). For the current dataset, the result is 2,562, which falls under the 2nd range (1.80 to 2.59) corresponding to the "agree" response. This implies that there is a general agreement with the sentences in this axis, and they hold importance for the surveyed sample.

1. Sample respondents expressed a high degree of agreement with the statement "The institution relies on innovation in producing goods", which ranked first with an average of 2.914 and a standard deviation of 0.951. 2.86% strongly agreed with the statement, while 40.00% agreed with it. Combining both responses revealed that they constitute 42.86%, a relatively high percentage.

2. The responses of the study sample indicated a high degree of agreement with the statement "The institution relies on innovation to provide services," which ranked third with an average of 2.800 and a standard deviation of 0.933. 54.29% agreed with the statement, which is relatively high.

3. Sample respondents expressed a high degree of agreement with the statement "Employees are cognizant of the innovation values in the institution". This statement ranked sixth with an average of 2.057, and a standard deviation of 0.639. 17.14% of respondents strongly agreed with the statement, while 60.00% agreed. Combining the two types of agreement demonstrates that a high percentage, namely 77.14%, agreed with the statement.

4. The responses of the study sample indicated a high degree of agreement with the statement "The institution trains employees on effective innovation practices related to the institution." This statement ranked second with an average of (2.800) and a standard deviation of (0.868). (05.71%) strongly agreed, (31.43%) agreed, and when

these responses are combined, they represent (37.14%), an average percentage.

5. Sample respondents expressed an average degree of agreement with the statement "The institution has a specific innovation that distinguishes it from its competitors in the market." This statement ranked fifth with an average of (2.057) and a standard deviation of (0.236), with (94.29%) responding that they agree, which is a very high percentage.

6. The responses of the study sample indicated an average degree of agreement with the statement "The institution relies on information and communication technology for its specific innovation." This statement ranked fourth with an average of (2.743) and a standard deviation of (0.95), with (60.00%) responding that they agree, which is an average percentage.

- **Axis two : types of innovation**

Table (02): The respondents' answers to the statements related to (the reliance of institutions on industrial innovation)

Order	Significance level	The value of the statistic Chi-square	Standard Deviation	Arithmetic average	Response					Statements		Number
					Strongly disagree	disagree	neutral	agree	strongly agree			
2	0,019*	9,914	0,852	3,257	2	12	**14**	7	0	F	The institution relies on radical innovation (innovative production method) in providing service or in producing goods	1
					5,71	34,29	40,00	20,00	0,00	%		
5	0,350	3,286	1,14	2,771	0	**13**	7	9	6	F	innovation in packaging by providi	2

	1		3		4		6		
	0,000*		0,000*		0,007*		0,633		
	27,143		23,543		10		0,914		
0,848	1,121		0,53		0,648		0,796		
2,857	3,486		2,886		1,857		2,886		
Overall arithmetic average	14,29	5	0,00	0	0,00	0	0,00	0	0,00
	51,43	**18**	8,57	3	0,00	0	25,71	9	37,14
	5,71	2	71,43	**25**	14,29	5	37,14	**13**	20,00
	25,71	9	20,00	7	57,14	**20**	37,14	**13**	25,71
	2.86	1	0,00	0	28,57	10	0,00	0	17,14
	%	F	%	F	%	F	%	F	%
	on radical innovation (technological) in the provision of service or in the		The institution relies on innovation other than previously mentioned		on marketing improvement innovation in the provision of service or in the production		The institution relies on specific innovation in the business model		
	6		5		4		3		

* Significant differences at the level of (0.05) or less

Source: the SPSS26 program outputs are placed in the annexes

The table above depicts that most of the data is focused around the responses of 'neutral' and 'non-agree'. The weighted average is the chosen criterion for determining the axis outcome. It is calculated by taking the mean of the averages, obtained by adding up all the averages and dividing by the number of sub-questions in the axis. The resulting mean, as shown in the table, is 2.857, which corresponds to the third directional range: (from 2.60 to 3.39). This range corresponds to the 'neutral' response, indicating that the general direction of the statement is neutrality. This implies that the paragraphs of this axis do not garner agreement and do not hold importance for the surveyed sample.

According to the results of the Chi-square test, all statements were statistically significant, with a significance level below 0.05. However, two statements lacked statistical significance, indicating that there was no variation in the viewpoints of the study society regarding their responses to the statements concerning their institution's dependence on industrial innovation.

From this, we can infer that the surveyed institutions do not prioritize or rely on industrial innovation.

- **Axis three : the outcomes of innovation utilization**

Table (03): The respondents' answers to the statements related to (results were completed financially for the institution while relying on innovation)

Order	Significance level	The value of the statistic Chi-square	Standard Deviation	Arithmetic average	Response					Statements		Number
					Strongly disagree	disagree	neutral	agree	strongly agree			
	0,000*	38,800	0,416	2,057	0	0	4	**29**	2	F	allowed the creation of a new market for the	1

	0,074*	5,200	0,825	3,286	Innovation had no influence on market leadership	F	0	**18**	9	8	0	0
						%	0,00	51,43	25,71	22,86	0,00	0,00
	0,000*	24,029	0,284	2,086	Innovation contributed in making the institution a leader in the markets	F	0	0	3	**32**	0	0
						%	0,00	0,00	8,57	91,43	0,00	0,00
	0,053	5,886	0,701	3,257	Innovation enabled the creation of a competitive advantage for the institution	F	0	14	**16**	5	0	0
						%	0,00	40,00	45,71	14,29	0,00	0,00
						%	0,00	0,00	11,43	82,86	5,71	
					2		3				4	

Innovation allowed it to outperform its competitors in the market	5	F	3	**21**	3	8	0	2,457	0,950	24,771	0,000*	
		%	8,57	60,00	8,57	22,86	0,00					
Innovation has allowed for the creation of consumer loyalty to the institution	6	F	0	12	0	0	0	2,657	0,482	3,457	0,063*	
		%	0,00	34,29	0,00	0,00	65,71					
Overall arithmetic average								2,633	0,610			

* Significant differences at the level of (0.05) or less

Source: the SPSS26 program outputs are placed in the annexes

According to the table above, the majority of the data is clustered around the responses "Agree" and "Neutral". The criterion used to determine the result for the axis is the weighted arithmetic mean, which is obtained by summing the averages and dividing by the number of sub-questions for the axis. In this case, the result is 2.633, which falls within the range of the third direction domain (2.60 to 3.39) and corresponds to the "Neutral" response. This suggests that the overall direction of the statement is towards neutrality, with the paragraphs on this axis lacking agreement and not carrying much importance for the surveyed sample.

The results of the Chi-Square test indicate that all of the statements were

statistically significant, with a significance level of less than 0.05. However, two of the statements were not statistically significant, illustrating that there was little variation **among the respondents' perspectives on the statements concerning the actual financial outcomes of institution that relied on innovation.**

5. Hypothesis Testing:

Hypothesis 1 testing:

This confirms the first hypothesis, which states that **innovation can help start-up institutions achieve leadership.**

The study variables, namely the sector of activity, have an effect on the adoption of innovation in the institutions under study.

Hypothesis 2 testing:

- **There are statistically significant differences at (α = 0.05) attributed to the field of activity that influence its utilization of innovation.**

As the variable of the **institution's use of innovations** is the collective dimension of all the items in the first axis and it is calculated using means through SPSS26 program, it automatically becomes a quantitative variable with a range of numbers between 1 and 5 representing the arithmetic average of all the items to the respondents.

Since the variable of the **field of activity** has more than two groups and it is qualitative in nature, then the appropriate statistical test to examine this hypothesis is a One Way ANOVA test.

A condition for conducting a one-way ANOVA test is that the institution's variable of using innovations follows a natural distribution. Among statistical tests, it is presumed crucial that the probability distribution of the used data are normal, which statistics considers as one of the most important distributions. More so, it forms the basis for many statistical theories and plays a fundamental role in hypothesis testing, confidence intervals, and other statistical methods. Many traits such as age, education level, occupation, and others, when measured over a large number of observations, tend to follow a normal distribution, if not in a perfect form, then with a close approximation.

To test for normal distribution in our research, we utilized SPSS26 program to bring out tables normal distribution for all variables, and relied on testing the following hypotheses:

Null Hypothesis H0: The significance level (SIG) is lower than 0.05, and thus, the variables do not conform to a normal distribution.

Alternative Hypothesis H1: The significance level (SIG) is greater than 0.05, and therefore, the variables do conform a normal distribution.

Table (04): normality tests

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistics	ddl	Sig.	Statistics	ddl	Sig.
Use_of_Innovation	255,	35	000,	887,	35	002,
a. Correction of Lilliefors's significance						

Source: Using SPSS26, we bring out the results in the following tables

Table (05): Rangs

	Domain of institution's institution	N	Average rank :
Use_of_Innovation	Transformation industrial	11	24,95
	Service	21	15,57
	Combined	3	9,50
	Total	35	

Source: Using SPSS26, we bring out the results in the following tables

The above table shows us that the average rank values for each type of **field of activity** are somewhat divergent. This indicates that there are statistically significant differences between the groups of the **field of activity** and the **use of institutions for innovation** , but the following table is the one that shows us whether there are differences or not through the following two statistical hypotheses:

Null hypothesis H_0 : The lowest value of the SIG significance level is greater than 0,05. There are no statistically significant differences between the means of the groups

Alternative hypothesis H_1 : The lowest value of the SIG significance level is greater than 0,05. There are no statistically significant differences between the means of the groups

Table (06): Statistical Tests [a,b]	
	Use_of_Innovation
H of Kruskal-Wallis	8,726
ddl	2
Sig. asymptotique	013,
a. Test of Kruskal Wallis	
b. Grouping variable: Domain of institution's activity	

Source: Using SPSS26, we bring out the results in the following tables

We will base our analysis on the level of significance, which is 0.013 and less than 0.05. This leads us to reject the null hypothesis (H0) and support the alternative hypothesis (H1) that there are significant differences between the means of categories for the variable "field of activity of the institution."

The first hypothesis is that there are statistically significant differences at (α = 0.05) attributed tothe domain of institution's activity that affects the use of innovation .

6. CONCLUSION

Ultimately, innovation is a key driver of entrepreneurship for startups, contributing to building a unique identity and making a positive impact on the market, leading to sustainable growth and business success.

In light of all the results and statistics, we can come to the following conclusions:

- The majority of the sample respondents believe that institutions use innovation to an average degree.
- The most significant indicators of institutional innovation use include:
- The institution's reliance on innovation in production of goods
- The institution's dependence on innovation in service delivery
- Employees are cognizant of the institution's innovation values
- The institution's provision of training for employees to good control of innovation
- The presence of a specific innovation that sets the institution apart from its competitors on the market
- The institution's use of information and communication technology in its own innovation.

This leads us to address the first hypothesis that innovation enables start-up institutions to become leaders, but only to a limited extent. For instance:

- Innovation helped to create a new market for the institution.
- Innovation made the institution a leader in the market.
- Innovation allowed the institution to surpass its competitors in the market.
- Innovation had an impact on market leadership.

However:

- Innovation helped to create a competitive advantage for the institution.
- Innovation created customer loyalty for the institution.

Based on this, we can conclude that the surveyed institutions embraced innovation, but few results were achieved.

The statement "Innovation had no impact on market leadership" is considered significant since it is a negation of the original question.

Recommendations:

- Investment in Research and Development: Allocate resources to develop new products or services that meet market needs.
- Encourage Internal Innovation.
- Leveraging Technology: Effectively use technology to improve operations and deliver more efficient products or services.
- Customer Data Analysis: Benefit from data analytics to understand customer behavior and enhance the shopping or usage experience.
- Develop Strategic Partnerships: Collaborate with other institutions or research entities to enhance innovation opportunities and knowledge sharing.

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Attachments:

Questionnaire

- Personal information about the entrepreneur

Age: between 22 to 35 - between 35 to 50 - over 50 years old
Gender: male - female
Academic qualification: below university - university formation - formation in private institutions
Position in the institution: owner of the institution - manager – employee

- Information about the institution (nature of the institution, activity.....)

Enterprise size: Micro enterprise (less than 9) - Small enterprise (10 to 50) - Medium enterprise (larger than 50)
The institution's field of activity: industrial, transformational, service, mixed
Nature of the institution: agricultural - industrial - consulting services - medical services - e-commerce

First Theme: it's about the organization's use of innovations (using the five-point Likert criterion).

Strongly Disagree	not agree	neutral	agree	Strongly Agree	
					The institution relies on innovation in producing goods
					The organization relies on innovation in providing service
					Employees are aware of the organization's innovation values
					The organization trains employees on good control of the organization's innovation
					The organization has its own innovation that distinguishes it from its competitors in the market
					The organization relies on information and communication technology for its innovation

Second Theme: it's about the types of innovations and the degree of their use in the organization (using the five-point Likert criterion).

Strongly Disagree	not agree	neutral	agree	Strongly Agree	
					The organization relies on radical innovation (an innovative production method) in providing services or producing goods
					The organization relies on innovative innovation in packaging, service provision or production of goods
					The organization relies on a special innovation in the business model
					The organization relies on marketing improvement innovation in providing services or producing goods
					The organization relies on another innovation not mentioned previously
					The organization relies on radical (technological) innovation in providing services or producing goods

Third Theme: it's about the results of using innovations (using the five-point Likert criterion).

Strongly Disagree	not agree	neutral	agree	Strongly Agree	
					Innovation allowed the creation of a new market for the organization
					Innovation has created a competitive advantage for the organization
					Innovation made the organization a market leader
					Innovation had no impact on market leadership
					Innovation allowed it to outperform its competitors in the market
					Innovation allowed creating consumer loyalty to the organization

Distribution of sample individuals according to gender

gender					
		Frequencies	**Percentage%**	**Corrected Percentage %**	**Cumulative Percentage%**
Results	**Male**	30	85,7	85,7	85,7
	Female	5	14,3	14,3	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to age variable

Age					
		Frequencies	**%Percentage**	**%Corrected Percentage**	**%Cumulative Percentage**
Results	**35 to 50**	16	45,7	45,7	45,7
	22 to 35	12	34,3	34,3	80,0
	50 to -	7	20,0	20,0	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to education qualification variable

Education qualification variable					
		Frequencies	%Percentage	%Corrected Percentage	%Cumulative Percentage
Results	University education	27	77,1	77,1	77,1
	Training in private institutions	5	14,3	14,3	91,4
	Non-university education	3	8,6	8,6	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to organizational status variable

organizational status					
		Frequencies	%Percentage	%Corrected Percentage	%Cumulative Percentage
Results	Employee	17	48,6	48,6	48,6
	Leadership	13	37,1	37,1	85,7
	Entrepreneur	5	14,3	14,3	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to organization size variable

organization's size					
		Frequencies	%Percentage	%Corrected Percentage	%Cumulative Percentage
Results	Small entreprise	18	51,4	51,4	51,4
	Microentreprise	14	40,0	40,0	91,4
	Medium	3	8,6	8,6	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to the organization's field of activity variable

organization's field of activity					
		Frequencies	%Percentage	%Corrected Percentage	%Cumulative Percentage
Results	Service	21	60,0	60,0	60,0
	Industrial	11	31,4	31,4	91,4
	Mixed	3	8,6	8,6	100,0
	Total	35	100,0	100,0	

Distribution of sample individuals according to organization's nature variable

organization's nature					
		Frequencies	%Percentage	%Corrected Percentage	%Cumulative Percentage
Results	Agriculturel	9	25,7	25,7	25,7
	E-commerce	8	22,9	22,9	48,6
	Consulting	7	20,0	20,0	68,6
	Industrial	6	17,1	17,1	85,7
	Medical	5	14,3	14,3	100,0
	Total	**35**	**100,0**	**100,0**	