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THE LEVEL OF E-COMMERCE ADOPTION IN SMES: THE CASE OF TIRANA, ALBANIA

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Abstract – This Electronic commerce has enabled a competitive market, and as a result, many companies are considering changing their business models to be as competitive as possible. Managers believe that the use of e-commerce provides them with better relationships with customers and suppliers, improved business processes, and an essential part of the business today. To make the most of e-commerce applications, businesses are redesigning their processes, trying to achieve the same thing in different ways.
Small and medium-sized enterprises (SMEs) face increasing competitive pressure as a result of globalization and market openings, driven by new technologies and innovations. They need to find efficient ways to cope with these challenges because we are dealing with long-term and growing challenges. To survive and thrive in such a competitive environment, they must develop competitive advantages. This requires knowledge, financial resources, and economic flexibility.
SMEs play a significant role in national economies.
The purpose of this paper is to measure the level of adoption of e-commerce applications among SMEs in Tirana.
To achieve the above goal, the following hypothesis has been formulated and tested:
H1: The longer a company's lifespan in the market, the more willing they are to adapt to e-commerce applications. H2: Internal company factors influence the adoption of e-commerce applications. H4: The higher the pressure from consumers and suppliers on the company, the more willing they are to adapt e-commerce applications. H5: The more support from companies offering training for e-commerce applications and from the government, the more inclined companies are to adopt its applications.

Keywords –E-Commerce, SME, Adoption, Familiarity, B2B

I. INTRODUCTION

The purpose of this paper is to measure the level of adoption of e-commerce applications among SMEs in Tirana.

To achieve the above goal, the following hypothesis has been formulated and tested:

H1: The longer a company's lifespan in the market, the more willing they are to adapt to e-commerce applications. H2: Internal company factors influence the adoption of e-commerce applications. H4: The higher the pressure from consumers and suppliers on the company, the more willing they are to adapt e-commerce applications. H5: The more support from companies offering training for e-commerce applications and from the government, the more inclined companies are to adopt its applications.

Through testing these hypotheses, the aim is to determine the level of informatization and

specifically the adoption of e-commerce applications among SMEs in Tirana, in enhancing their ability and competitive advantage, benefiting from the use of this technology.

II. Materials and Methodology

In this study, quantitative research methods were used due to the nature of the data collected through a questionnaire. Quantitative research provides the opportunity to gather statistical information about research questions, helping us reach accurate conclusions. The nature of the data allows for the application of various statistical tests to test hypotheses and, as a result, draw conclusions about them. Descriptive statistics such as mean, median, and standard deviation can be mentioned, as well as analytical statistics such as the t-test, analysis of variance (ANOVA), or multiple regression correlations.

3.2 Sample Selection

The main methods used to select a sample for observation are probabilistic sampling methods and non-probabilistic methods. Meanwhile, new theories on indirect sampling methods are being developed, especially in cases where it is difficult to find a statistical database for the population on which the selection is made (Lavallée 2002, 2007).

In cases where the units of observation are businesses, stratification is used for control over economic activity, the size of the enterprise in terms of the number of wage earners, and geographical distribution. However, to follow such a procedure, one would need access to the Business Register. The lack of access to the business register is one of the limitations of this study, making it difficult to obtain a probabilistic sample of enterprises. Nevertheless, for the purposes of this study, alternative data sources were sought. Since the object of this study is only small and medium-sized enterprises operating in the Tirana region, the book "Çelësi - Practical Guide to the Capital" was used as a sampling base. Data on the listed enterprises in this book are categorized by economic activities and are easily accessible on the websites www.yellowpagesalbania.com and www.celesi.com.

Typically, to obtain a sample of enterprises, stratification is initially done based on the size of the enterprise (based on the number of wage earners). Then, stratification is done by economic activity. To select the enterprises to be included in the study, the main economic activities in which e-commerce is most applied were first identified. A list of enterprises was selected from the "Yellow Pages" book based on the activities they operate in the market. However, this list of enterprises does not contain information about the number of employees in each of them. For this reason, enterprises were initially contacted by phone to identify the number of employees. The number of selected enterprises was 150, of which 124 agreed to participate in the study.

3.3 Research Instrument

The main instrument used for data collection in the study is the questionnaire, which was designed to gather information about the extent of e-commerce application in Tirana and to assess the benefits of e-commerce application for companies.

The questionnaire is divided into distinct sections.

In the first section, the questions are structured to collect information about the company's demographic aspects and its performance. The demographic data collected through the questionnaire include the company's name and address, the number of employees, the number of years the company has been in operation, its economic activity and sector, as well as the gender of the company's administrator. Data on the company's performance were collected through five questions measured on a Likert scale. These questions relate to profit, sales, financial resources (liquidity and investment capacity), market share, company image, and consumer loyalty concerning the company's industry's average performance.

The second section of the questionnaire was designed to gather information about the extent to which e-commerce applications are recognized and used in the surveyed companies. The first question in this section seeks information on whether the company has a website. Questions regarding the recognition of e-commerce applications and their current use state list these types of application forms: communication through email with partners, promoting the company by placing basic information on its website (contact details, company location), promoting the company's products on the website, online information requests from customers, online customer orders, sending customer invoices online, receiving online payments from customers, and enabling customers to track their online orders. For companies that recognize and use e-commerce applications, information was collected on whether they have ever discontinued or refused to use any of the mentioned applications, how many years they have been using e-commerce applications, and the markets in which they use them.

The questionnaire was required to be completed by the company's manager, and the interviewing method was direct.

The internal consistency, for instance, through the calculation of Cronbach's alpha, was used to evaluate the reliability of the questionnaire (George, D., & Mallery 2003).

To create a valid, concise, and reliable questionnaire, its preparation went through several stages.

The first stage is closely related to determining the study's objectives. Based on the study's objectives and the theoretical approach to e-commerce treatment in the context of its benefits and its adaptation level by companies, a draft questionnaire was prepared.

In the second stage, the content's validity was assessed using the 'expert panel' method. The questionnaire was given to several experts in the field of statistical analysis to judge the variables included and to gather their opinion on the most suitable type of statistical analysis. Experts were asked to evaluate the questionnaire and determine which questions should be retained in the questionnaire, which questions needed modification, and which should be removed (such as unclear or non-essential questions for the study). The evaluation of the questionnaire revealed that, in general, the questions should be retained in the questionnaire..

Interviews with companies were conducted in the period from November 2021 to March 2022. After data collection, data processing was performed using SPSS. To assess the internal consistency of the questionnaire, the Cronbach's alpha coefficients were utilized. Cronbach's alpha coefficient is part of reliability analysis and indicates how well certain variables match each other. A high Cronbach's alpha indicates that the variables match well, implying a high internal consistency. Essentially, this means that subjects who tend to choose high values for one question are also inclined to choose high values for other questions. Thus, if we know the result for one question when alpha is high, we can accurately predict the results for other questions included in the Cronbach's alpha analysis. This would be impossible if alpha were low. According to statistical theory, the acceptable and unacceptable values of the Cronbach alpha coefficients are as follows:

- If Cronbach alpha < 0.5, the questionnaire's reliability level is very low.
- If 0.5 ≤ Cronbach alpha < 0.6, the reliability level is at the critical acceptance level.
- If 0.6 ≤ Cronbach alpha < 0.7, the reliability level is acceptable.
- If 0.7 ≤ Cronbach alpha < 0.8, the reliability level is moderately acceptable.
- If 0.8 ≤ Cronbach alpha < 0.9, the reliability level is high but not optimal.
- If the Cronbach alpha values are ≥ 0.9, they indicate an optimal level of internal questionnaire reliability.

In Table 3.1.1 below, the Cronbach's alpha coefficients are provided for each group of questions in Section B of the questionnaire (in Annex 1, Table A1, these values are provided for all tested variables).

Table 3.1.1: Cronbach's Alpha Coefficient Values

Variable Number of Variables	**Cronbach's Alpha if Variable Removed**	**Number of Variables**
Considering the industry average or closest competitors, how would you rate the company's performance?	0,881	5
Assessment of the current state of e-commerce usage	0,870	8
Impact of e-commerce on company performance	0,944	9
Impact of e-commerce on external company performance	0,935	10
Impact of e-commerce on company efficiency and effectiveness	0,947	9
Impact of e-commerce on image building and CRM	0,900	9
Impact of e-commerce on internal performance	0,945	7
Impact of e-commerce on comparative advantage	0,908	5
Influence of technological factors on e-commerce adoption	0,909	9
Company readiness for e-commerce adoption	0,913	3
Business technological strategies in e-commerce adoption	0,933	4
External pressure on e-commerce adoption	0,736	4
External support in e-commerce adoption	0,788	3

4. DESCRIPTIVE ANALYSIS OF RESULTS

4.1 Descriptive Analysis

In the study, data were collected from 124 small and medium-sized enterprises operating in the Tirana region (Figure 4.1.1), of which 24.1% are managed by females, and the remaining 75.9% are led by male administrators. Referring to INSTAT data, in the statistical register of enterprises for the year 2022, it is found that 24.1% of businesses in the Tirana region are managed by females. Among the interviewed enterprises, 27.4% are micro-enterprises, 31.5% are small enterprises, 11.3% are medium-sized, and 29.8% are large enterprises.

Table 4.1.1 General Characteristics of Interviewed Companies

Characteristics	**The number of enterprises**	**% of enterprises**
Gender of the administrator		
Male	94	75,9
Female	30	24,1
Size of the enterprise		
1-4 employees	34	27,4
5-9 employees	39	31,5
10-49employees	14	11,3
+ 50 employees	37	29,8
Does your company have a website?		
Yes	113	91,1
No	11	8,9
Years of company presence in the market		
Up to 2 years	37	29,8
3-6 years	59	47,6
Over 7 years	22	22,6
Markets where e-commerce is used		
B2B	42	33,9
B2C	56	45,2
B2B & B2C	26	20,9
Economic activity		
Banking	13	10,5
Trade	47	37,9
Services	17	13,7
IT Software dhe Hardware	10	8,1
Construction	11	8,9
Hotels and Restaurants	4	3,2
Manufacturing Industry	9	7,3
Music and Entertainment	6	4,8
Marketing & promotion	7	5,6

The majority of small and medium-sized enterprises (SMEs) included in the study have their own website (84.7%), while the remaining 8.9% do not have a website (Table 4.1.1).

Regarding the sector of operation, 38% of the studied SMEs operate in the trade sector, 14% in the services sector, 10.5% in the banking sector, 8.9% in the construction sector, 8.1% in IT Software and Hardware, 7.3% in the manufacturing industry, 3.2% in the hotel industry, 5.6% in Marketing & Promotion, and 4.8% in music and entertainment activities.

As for the longevity of enterprises, it is found that 29.8% of them are relatively new, meaning they have been operating in their business for two years or less. 47.6% of the enterprises in the study have been in business for a period between 3 and 6 years, while the remaining 22.6% have been in the market for more than 7 years.

Among the companies that use at least one of the e-commerce formats (listed in the study questionnaire), 45.2% use them in B2C markets, 20.9% of enterprises use them in combined B2B & B2C markets. The B2G market is included in the B2B market, as the number of interviewed enterprises operating in the B2G market was very small. Thus, 33.9% of enterprises operate in the B2B & B2G markets.

In Figure 4.1.2, the distribution of companies using e-commerce applications is shown according to the sectors and markets in which they operate. It can be observed that in the trade and other service sectors, there is an almost proportional distribution of companies according to the markets in which they operate. Thus, approximately 29% of the companies in the study operate in the B2B & B2C markets, while in the B2C markets, we have 51.2% in the services sector and 47.2% in the trade sector. On the other hand, 50% of IT Software and Hardware companies operate in the B2B markets, and 40% operate in the B2B & B2C markets.

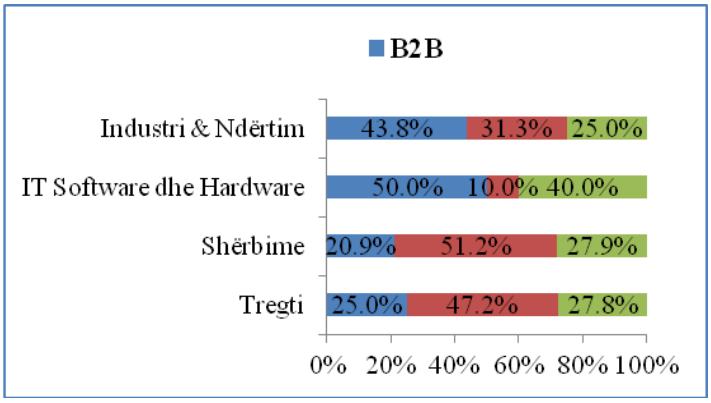

Figure 4.1.2: Distribution of Companies by Sectors and Markets

In the questionnaire prepared for this study, assessments were collected on several dimensions of company performance related to sales, profit, financial resources, market share, company image, and customer loyalty measured on a Likert scale from 1 to 5, where 1 implies a very poor element

and 5 an excellent one, taking into account the industry average or the closest competitors. The overall ratings for these questions indicate that all of these elements have average or above-average importance, with the most important being the company image and customer loyalty, which were rated on average at 3.74 points (Figure 4.1.3).

Despite the fact that 9.1% of companies reported not having a website, they were asked if they had knowledge of any of the e-commerce application formats. The results of the companies' responses are provided in the chart below (Figure 4.4).

- 95.2% of companies that are familiar with e-commerce applications communicate via email with partners.
- 87.9% of companies promote their company on the internet.
- 83.9% of companies are aware of promoting their company's products on the internet.
- 79% of companies are familiar with the form of online customer requests.
- 67.7% of companies are aware of receiving online orders from customers.
- 64.5% of companies are aware of sending invoices to consumers online.
- 52.4% of companies are familiar with e-commerce applications where consumers can verify the status of their online orders.
- 47.6% of companies are familiar with receiving online payments from customers.

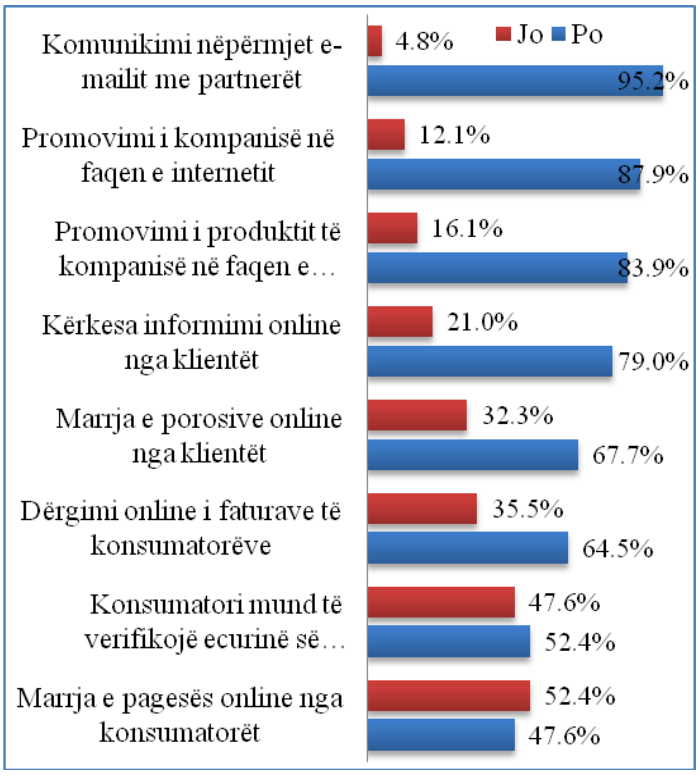

Figure 4.1.4:Familiarity with E-commerce Applications by Companies

This indicates that the majority of companies are at least familiar with basic e-commerce applications. Out of all the interviewed companies, only 29% of them are familiar with the eight listed e-commerce

application formats in the questionnaire. The most recognized form of e-commerce applications by companies is communication with partners via email (Figure 4.1.4).

On average, these forms of e-commerce applications are known to 72.3% of the interviewed companies, a coefficient that leads us to believe that companies have good awareness of these applications.

Figure 4.1.6 provides the distribution of companies that have websites based on their current usage assessment of e-commerce. Among the companies that communicate with partners via email, 52.4% rate the current usage of e-commerce as very good, 25.7% rate it as moderately good.

43.8% of companies rate the current state of promoting the company by placing its basic information on the website (contact details, company location) as very good. 34.3% of companies rate the current state of promoting the company's products on the website as very good. On the other hand, companies rate other applications such as online customer information requests, online order placement by customers, online delivery of customer invoices, online customer payments, and verification of order status as good.

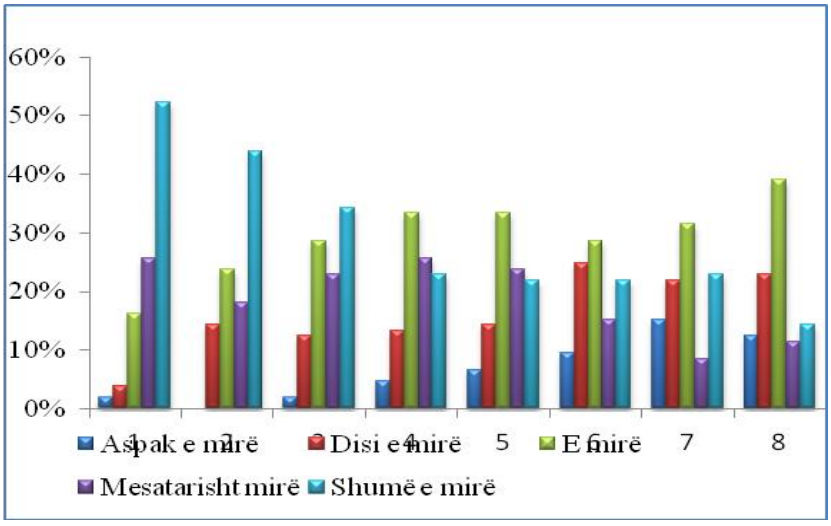

Figure 4.1.6: Current state of e-commerce usage.

1- Communication via email with partners (clients, suppliers, etc.); 2- Promoting the company by placing its basic information on the website (contact details, company location); 3- Promoting the company's product on the website; 4- Online customer information requests; 5- Online order placement by customers; 6- Online delivery of customer invoices; 7- Online customer payments; 8- Allowing customers to verify the status of their orders online.

III. RESULTS

E-commerce has created a competitive market, and many companies are considering changing their business models to be more competitive.

SMEs face increasing competitive pressure due to globalization, market opening, new technologies, and innovations. They need to find efficient ways to

cope with these challenges as they are long-term and growing.

In today's economic landscape, consumers are more focused on finding the best-priced products. Therefore, companies using e-commerce strive to offer more value at a lower price.

The use of e-commerce applications provides a competitive advantage compared to competitors. Many basic business processes are focused on improving business results, productivity, production, and more through the use of these applications.

The development of the software industry is considered an important factor in digitization due to the economic benefits that come with competitive advantages, productivity, cost reduction, savings on unrenewable resources, energy savings, and environmental protection.

Business strategy adaptation focuses on the demand of small and medium-sized businesses and the personalization of offers for their consumers. Nevertheless, technological capabilities and the application of adaptations such as e-commerce lead businesses to radical changes.

Among all the factors that hinder the development of e-commerce, the issue of financial resources refers to the total financial resources that the organization will use for the organization, procurement of necessary IT equipment for the implementation of e-commerce, consultancy payments for personnel training, and website maintenance and other infrastructure elements.

Top management plays a crucial role in adopting e-commerce, not to mention that this adoption depends entirely on the support of top management. The support of top management can positively influence the process of assimilating e-commerce. The perceived benefits refer to the acceptance and recognition of the relative advantages of e-commerce use by the organization.

Business organizations are more willing to adopt new technologies if they are in line with their value system, existing infrastructure, business processes, and culture.

Through the use of e-commerce, consumers can transact 24/7, inform themselves about prices by visiting different websites, and have endless opportunities for choosing how they receive a product or service.

E-commerce allows manufacturers and consumers to bypass intermediaries and reduce all their costs. It also allows manufacturers to develop their countries by selling products directly to their consumers, ultimately increasing production, reducing costs, and reducing the price of their products, which ultimately leads to an increase in their profits.

IV. CONCLUSION

In conclusion, the research has shown that most companies are at least familiar with basic e-commerce applications. The most recognized e-commerce application among companies is communication via email with partners. The evaluation of the current state of e-commerce usage also reveals that the most commonly used application is communication via email with partners. On the other hand, the application "Consumers can verify the status of their orders

online" has a rating below average because companies use it moderately for online product sales.

When considering the distribution of companies that have a website according to the assessment of current e-commerce usage, it resulted that companies that communicate via email with partners find the current state of e-commerce usage very good (52.4%), 25.7% find it reasonably good. Furthermore, 43.8% of companies rate the current state of promoting the company on the Internet as very good, while 34.3% rate the current state of promoting the company's product on the Internet as very good. On the other hand, companies rate other applications such as online customer information requests, online customer order placement, online customer invoice delivery, online customer payment, and the ability for consumers to verify the status of their orders online as good**.**

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