

The Influence of Information Technologies In the Development of Entrepreneurship

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Abstract: *Today, entrepreneurship is recognized as one of the key drivers of the economic development of every country. The use of information and communication technologies in entrepreneurship provided companies with the opportunity to quickly access the necessary data, process and analyze it to increase the productivity and performance of the company.*

Research conducted by the Republic Institute for Statistics of the Republic of Serbia showed that in 2021, 28.0% of companies in Serbia sold their products/services via the Internet and that 100% of companies have an Internet connection, while 84.9% have a website. companies.

This paper aims to examine the impact of information and communication technologies on the development of entrepreneurship in the Republic of Serbia.

Keywords: *IT technologies, entrepreneurship, companies*

1. INTRODUCTION

In modern conditions, the socio-economic development of regions implies searching for new opportunities and forms of doing business (Mukha, Klochko, 2021). It is extremely important to create conditions that will ensure the continuous development of entrepreneurship since this will contribute to economic development (Šormaz, 2021). In today's business, information and communication technologies (ICT) are recognized as key factors in the development of all processes. Considering digitalization and automation in many spheres of life in the modern world (Milojević et

al, 2021)), information and communication technologies have become an integral factor in the daily lives of people over the last decade. (Bandalović, Šuljug Vučica, Tanfara, 2021). The development of ICT has not only led to the development of innovativeness and productivity of organizations, but these technologies (Travar, Travar, Ristić, 2021) have introduced significant changes in recent years in almost all aspects of our lives.

The development of entrepreneurship is largely conditioned by information and communication technologies. Many authors have analyzed the impact of information and communication technologies on the development of entrepreneurship in their works. Mirrezaei Mirrezaei, Pourkaeid (2013 list some characteristics that increase the effectiveness of IT technologies in the field of entrepreneurship:

1. *Increased speed:* fast data calculation and processing and its immediate transfer reduce the time of work and consequently increase productivity.

2. *Increased accuracy:* In human-based occupations, the accuracy of doing work varies, while this technology ensures high and constant accuracy.

3. *Reduction of the physical size of information storage:* with the development and application of this technology, there is no need to carry and maintain a large number of specialized manuals. Information on several books can be easily stored on a compact disc or the required resources can be received over computer networks.

4. *Eliminating some administrative corruption:* Using this technology increases transparency in doing business and eliminates many middlemen. These two key advantages lead to the elimination of some administrative corruption, especially at the lower level.

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5. *Creating opportunities for remote collaboration:* communication, telephone, teleconferencing, video conferencing and collaboration systems, etc. are examples of the application of this technology in the field of entrepreneurship.

Prjić et al. (2015) state that the high level of use of mobile phones in developing countries and the increased availability of Internet services have enabled many companies to expand their business. However, it is evident that the needs of SMEs in terms of IT infrastructure and information systems (Skorup et al., 2012):

- stable and mature business solutions, not isolated applications that solve individual problems;
- a flexible and upgradable information system on which the company can establish its growth;
- access to business models used by the most successful SMEs;
- proven implementation methodology;
- acceptable price.

2. ICT TECHNOLOGIES

Information communication technologies (ICT) is a term that refers to all communication technologies, including the Internet, wireless networks, mobile phones, computer systems, software, multimedia, video conferencing, social networks and other media applications and services that allow users to access, download, transmit and information management in digital form (Ćosić, Salkić, Krunić, 2021).

Roztockí and Weistroffer (2015), indicate the importance of information and communication technologies in developing countries. The European Union, in its Digital Development Strategy until 2030, listed the development of the digital society as a priority and thus recognized the impact of information and communication technologies on economic development. The European Commission launched the Digital Agenda for the Development of Europe to develop a single digital market. In order to utilize the potential of information and communication technologies, the Government of the Republic of Serbia has adopted a series of strategies over the past few years with the ultimate goal of raising the quality of life and increasing employment (Strategy for Information Society and Information Security 2021-2026, Strategy for the Development of Digital Skills in the Republic of Serbia from 2020. until 2024...)

Empirical Research

To investigate the impact of information and telecommunication technologies on the development of entrepreneurship in the Republic of Serbia, empirical research was conducted through a survey questionnaire on a sample of 251 respondents in the period from May to June 2022. The research was conducted on the territory of the whole of Serbia. The questionnaires were distributed in the written electronic form to the respondents.

The Theoretical System Model of Research

The theoretical research system model (Figure 1.) consists of the independent variable The level of ICT and the dependent variable Level of entrepreneurship development. Both variables were analyzed with a questionnaire and 3 statements with 5 possible answers were formed for each (5-Likert scale).

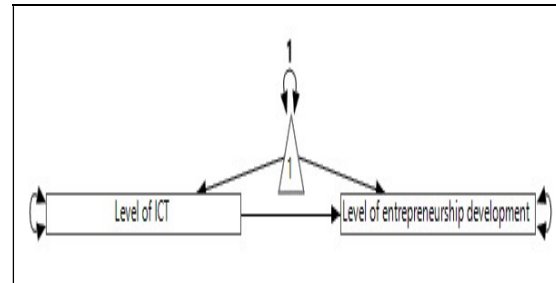


Figure 1. The theoretical system research model
Source: Author

The research task is to determine: whether the level of ICT does not affect or does it affect the level of entrepreneurship development. Based on the set-theoretical system model and set research tasks, hypotheses were formed:

H₀: The level of ICT does not affect the level of entrepreneurship development.

H_{alt}: The level of ICT affects the level of entrepreneurship development.

Correlation Analysis

The values of Pearson's correlation are given in (Figure 2.) Scatterplot Matrix. The highest correlation coefficient is the connection between the independent variable level of ICT and the dependent variable level of entrepreneurship development is 0.7611 and it is strong.

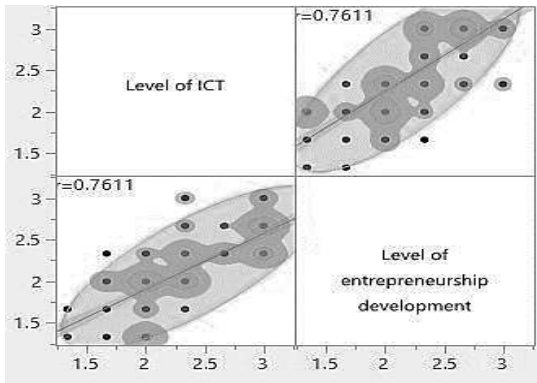


Figure 2. Scatterplot Matrix
Source: Author

Regression Analysis Intercept

In (Table 1.) Summary of Fit, the basic evaluation of the model was performed. The coefficient of determination is 0.57931, which means that with 57.93% of the variability, the dependent variable level of entrepreneurship development can be explained by the independent variable level of ICT.

Table 1. Summary of Fit

Rsquare	0.579319
RSquare Adj	0.57763
Root Mean Square Error	0.259508
Mean of Response	2.167331
Observations (or Sum Wgts)	251

Source: Author

The assessment of statistical significance is given in (table 2.) Analysis of Variance and it amounts to $[F(1,249)=342.8980, p<0.0001]$.

Table 2. Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	23.092251	23.0923	342.8980
Error	249	16.768749	0.0673	Prob > F
C. Total	250	39.861000		<0.0001

Source: Author

In (table 3.) Parameter Estimates and in (Figure 3.) Unstandard contribution sizes independent variable level of ICT to dependent variable level

of entrepreneurship development. Based on these data, the null hypothesis cannot be confirmed, but the alternative hypothesis H_{ait} : The level of ICT affects the level of entrepreneurship development must be accepted.

Table 3. Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta	VIF
Intercept	0.5668718	0.087968	6.44	<0.0001	0	.
Level of ICT	0.6695253	0.036156	18.52	<0.0001	0.76113	1

Source: Authors

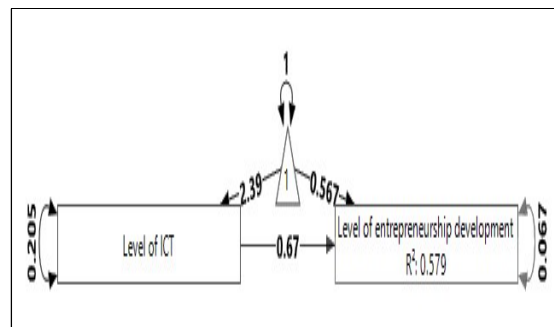


Figure 3. Unstandard contribution sizes
Source: Author

Standard contribution sizes of the independent variable level of ICT to the dependent variable level of entrepreneurship development are given in (Figure 4).

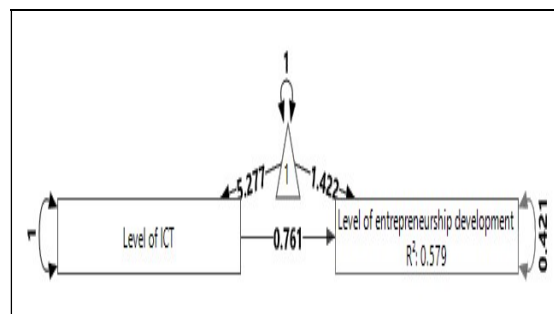


Figure 4. Standard contribution sizes
Source: Author

Based on the data from (table 3), a regression equation (formula 1 and 2) can be formed, which reads:

$$y = 0,5668718 + 0,6695253 \cdot x \quad (1)$$

or

$$\text{Level of entrepreneurship development} = 0,5668718 + 0,6695253 \cdot \text{the level of ICT} \quad (2)$$

The Regression Plot for the level of entrepreneurship development and level of ICT is shown in (Figure 5).

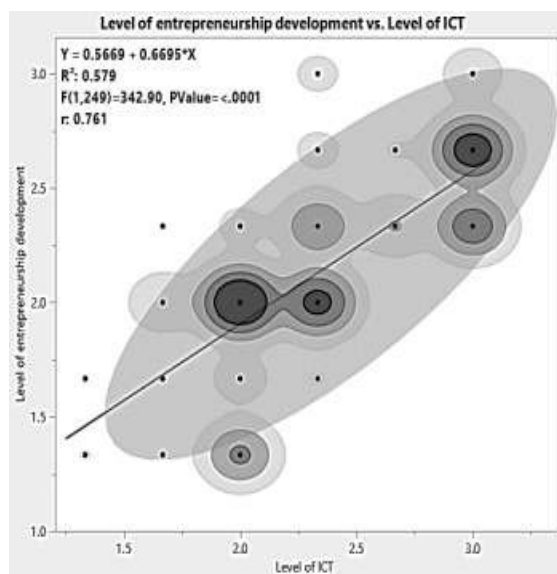


Figure 5. Regression Plot
Source: Author

It can be concluded that the greater the contribution of The level of ICT, the greater the level of entrepreneurship development.

3. CONCLUSION

In recent years, information and communication technologies have caused many changes in all social activities and are considered the most important tool of modern entrepreneurship. The use of these technologies has led to the improvement of business so that all factors involved in the economic cycle can communicate with each other in a common virtual space and share information, services, products and money (Radović-Marković and Marković, (2022).

The research showed that there is a dependence of entrepreneurship on information technologies, i.e. the higher the level of use of information technologies, the higher the level of entrepreneurship development.

In other words, entrepreneurship largely depends on the use of these technologies, that is, ICT technologies influence entrepreneurship and the creation of a favorable entrepreneurial climate.

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