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MODELING THE IMPACT OF E-COMMERCE ON GLOBAL GDP

Introduction

E-commerce is a field of digital economy that encompasses all the financial and commercial transactions conducted through computer networks and the business processes involved in conducting these transactions.

Changes in information and communication technologies in business go through the whole economy and ultimately have a major impact on macroeconomic performance. E-business is changing the macroeconomics in several useful ways. Some benefits are static due to more efficient use of available resources. For example, increasing productivity increases the country's GDP. In addition, e-business creates deflationary pressure by reducing search and transaction costs. Other achievements are dynamic, changing the path of national development. Reducing the costs of knowledge transfer and utilization is crucial to long-term economic growth. In general, e-business benefits the economy in many ways.

Another global trend is the increase in cross-border trade. When looking at e-commerce statistics, 38% of consumers prefer cross-border purchases and this number is steadily increasing. At the state level, much attention is now being paid to this issue. Programs have been developed to support the export potential of small and medium-sized businesses. For small businesses, e-commerce can give impetus for entry and consolidation in the external market. Customs and export duties have already been resolved in the European Union, providing new opportunities for the development of e-commerce in these countries. The development of e-commerce contributes to the growth of non-commodity exports and can become one of the drivers of the resurgence of retail trade, increasing competitiveness, and ultimately the development of the economy.

E-business exacerbates some of the problems of macroeconomic policy and generates new ones. For example, e-commerce smoothly crosses state borders, leading to a loss of tax revenue. Therefore, e-business has potentially serious implications for fiscal policy and public finance, and policymakers continue to look for e-business taxation methods. Addressing these challenges as we develop them requires a deepening of our understanding of the theoretical and empirical effects that e-business has on the overall economy.

This research work concentrated on verifying the impact of e-commerce development on GDP. In particular, from a macro-level regression analysis, determine whether e-commerce stimulates the continued growth of the national economy. The study is to examine the relationship between the percentage of people using mobile internet, the percentage of internet users, the percentage of users making online purchases, the frequency with which people use the internet during the day, and GDP in selected countries.

Literature overview

In his article "The Impact of E-Commerce and R&D on Economic Development in Some Individual Countries", R.D. Anvaria explores the impact of e-commerce, R&D, health care expenditures and government size on GDP per capita in twenty-one selected countries. For the study, the author uses panel data and regression methods of the generalized smallest area. The study was conducted on data from 2005 to 2013. The author notes that information and communication technologies influence the economic behavior of consumers through the demand side utility function and also influence producers' attitude to supply. The relationship between information and communication technologies and economic growth and supply-side efficiency in the economy is determined by a number of complementary factors, including organizational and managerial experience, organizational and legislative components, and communication structure. As a result, value added to output at the enterprise, sector and country levels will be increased, and this will eventually lead to economic growth [1].

In his article "The Study of Dynamic Effect Relationships between the E-Commerce, the Logistics and Economic Growth Based on the VAR Model", J. Huirong explores the relationship between dynamic effects between e-commerce, logistics development

and economic growth [5]. Based on the vector autoregression (VAR) model, based on annual China data from 2000 to 2012, using the Granger test and dispersion decomposition, the author finds that in the long run, the development of e-commerce is the cause of Chinese logistics and China's GDP growth, while economic growth GDP is not the cause of e-commerce and logistics [2].

The research by K. Dumicic, I. Palic, "Internet Purchases in European Union Countries: Multiple Linear Regression Approach" examines the impact of economic and information and communication development on the increase in online shopping by individuals for EU member states. This article fills a gap in the existing literature by examining the impact of individual computer skills, individual Internet skills, fixed broadband penetration, and individuals using the Internet to search for information about goods and services. The impact of GDP per capita on internet purchases was also examined. The linear regression model shows that the development of information and communication technologies is crucial for explaining online purchases to individuals, confirming the research hypothesis [3].

Results

This study assessed the impact of e-commerce on GDP in EU countries using multiple linear regression models. The models were used to study the period from 2005 to 2018. The results showed that explanatory variables in selected countries played a significant role in GDP. In other words, e-commerce, the number of internet users, the frequency of internet usage, and the number of users of online shopping services have been found to have a long-term impact on GDP in these countries. Online shopping has also been found to have the strongest effect, as they have a direct impact on the development of e-commerce. In addition, other variables, such as the percentage of people using the mobile Internet, the percentage of internet users, the frequency with which people use the internet during the day, also had a positive impact on GDP in the respective countries. The research shows that the development of e-commerce has an impact on economic growth.

The calculated model of multiple linear regression confirmed the hypothesis of the study that shopping online in the EU countries is most influenced by computer skills. The number of users influences all aspects of e-commerce development. Therefore, an increase in e-commerce turnover will be driven by an increase in the number of

users, attracting e-commerce to the younger generation, who are more boldly using electronic devices and more willing to use the services of various online stores, as well as by the growth of mobile commerce. Increasing the share of mobile commerce is one of the main trends in the development of e-commerce. All over the world, mobile devices account for a growing proportion of internet traffic. At the same time, the frequency of using smartphones and tablets for ordering goods and services on the Internet is constantly increasing.

Conclusions

Thus, the impact of the Internet economy on society and economic development is quite large, and it is expected that it will grow at a significant pace. However, the analysis and evaluation of this effect is quite complex, since it requires both the inclusion of measurable factors and the study of indirect factors that are not easily measurable and require the development of a methodology for their evaluation.

References

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