

DIAGNOSING THE RISK EXPOSURE OF ENTERPRISES IN BULGARIA WITH ONLINE SALES

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Abstract. In modern conditions, enterprises conducting online sales need to continuously apply new concepts, logic and mechanisms that are in line with the ongoing evolution of information and communication technologies and digital transformation. Unfortunately, Bulgarian enterprises operating in digital markets are significantly lagging behind in this direction. The main purpose of this study is to perform a thorough and multifaceted diagnostic to show the risk exposure of Bulgarian enterprises that operate online sales. The main theoretical and methodological basis of the study is the general risk theory and the private-scientific approach, as well as analytical methods such as: comparative method, analogy method. The specialized information sources of statistical data on the basis of which the research and comparative analyses are conducted are the National Statistical Institute (NSI) and Eurostat. Respondents of the survey are enterprises in Bulgaria with online sales of goods or services in the non-financial sector, which have 10 persons employed or more. Summarising the main findings of the survey suggests a relatively high-risk exposure of the enterprises surveyed.

Keywords: risk exposure, enterprises in Bulgaria, online sales, e-commerce.

JEL Classification: F14, L81, L86.

INTRODUCTION

Technological globalisation and digital transformation are revolutionising philosophy and imposing new standards and approaches to doing business. With the increasing adoption and use of digital technologies, the corporate world is rapidly entering e-commerce. The speed of digital development is so intense that modern e-commerce is prioritizing expanding the reach and efficiency of buying and selling channels and creating additional opportunities for commercial relationships. At the same time, economic actors are operating in an online environment where the safety and security of online transactions is becoming a critical factor. A number of conditions and reasons are created for the occurrence of risky situations and circumstances which increase their risk exposure.

A number of studies have shown that businesses selling online face a variety of challenges. On the one hand, they are driven by a change in the behaviour of their counterparties (Petrova, et al., 2022), (Luján-Salamanca, et al., 2025), (Hu, et al., 2025), (Zhao & Cao, 2024), (Stevenson & Rieck, 2024). At the same time, they face problematic situations as a result of wrong decisions and actions in the introduction and implementation of digital initiatives that change commercial relationships with consumers (Li & Yuan, 2025), (Pollák & Markovič, 2022), (Min, 2021), (Aseri, 2021), (Henriette, et al., 2016), (Hannibal & Knight, 2018), (Saeed, et al., 2023). These challenges are highly dynamic over time and give rise to a number of bottlenecks, with relatively high degrees and intensities of impact. They occur at all stages of the exchange of goods over the internet or through

digital technologies and in all directions of the market activity of businesses with online sales, increasing their risk exposure. The uncertainties of the actual commercial processes, especially for the Bulgarian online businesses, are reinforced by the challenges discussed.

The main purpose of this study is to conduct a thorough and multifaceted diagnostic to show the risk exposure of Bulgarian enterprises that sell online. In order to achieve the objective, the following research tasks are set: to track the changes in the status and risk exposure of Bulgarian enterprises with online sales in specific problematic events and situations; to interpret empirical aspects of the risk characteristics of Bulgarian enterprises with online sales and to indicate different potential for digital transactions; to formulate more important conclusions and generalizations about the weaknesses of the studied objects.

1. Materials and Methods

The commercial activity of Bulgarian enterprises operating on digital markets is invariably accompanied by the emergence of various risks and problematic situations. Identifying their manifestation during a certain period and diagnosing the risk exposure of enterprises has economic value. Risks can affect partly or wholly, singly or complexly, the state and functioning of enterprises with online sales. Thus, to a large extent, they are likely to affect the size and magnitude of their economic and financial performance, future development or survival.

In this context, different conceptual approaches, methods and tools are used to achieve the goal and realize the research tasks. The main theoretical and methodological basis of the research is the general risk theory and the private-scientific approach based on the research methods of deduction and induction, as well as the descriptive method and the method of analysis and synthesis. In this direction, analytical methods are also added, such as: comparative method, analogy method. The specialised information sources of statistical data on which the survey and comparative analyses are based are the National Statistical Institute and Eurostat. Respondents of the survey are enterprises in Bulgaria with online sales of goods or services from the non-financial sector, which have 10 persons employed or more, whose economic activity is in accordance with the Classification of Economic Activities. The target statistical population is defined on a random basis, which ensures a representative sample. The observation is sampled using one-stage cluster sampling. Technical processing and data calculations were performed by MS Excel.

In the analytical aspect, the study of the risk exposure of Bulgarian enterprises with online sales is based on quantitative and qualitative measures. In the course of the study, the relative share of enterprises in the EU countries that sell goods and services over the Internet is characterized, which results in the determination of the position and identification of the lag of Bulgarian enterprises. It compares the types of online sales (website, app sales or EDI-type sales) differentiated in Bulgaria and in the European Union. The survey focuses on enterprises in Bulgaria that own and maintain a website and the functionalities provided to online users. It takes into account the relative share of value of e-commerce sales of enterprises in the EU countries and specifically for Bulgaria. It analyses the quantitative and qualitative variables relating to the difficulties experienced by enterprises in Bulgaria, as well as the reasons that put them in problematic situations, which increase their risk exposure. On this basis, certain negative indications are identified and derived. Relevant conclusions and generalizations of theoretical and practical significance are reached.

2. Results and Discussion

The surveyed data show that the number of *enterprises in Bulgaria with e-commerce sales is still too small*. In 2024, Bulgaria ranks an unenviable 25th in this indicator compared to all member states, ahead of only Romania and Luxembourg. The relative share of enterprises selling goods and services online is 15.1%, 8.7 percentage points below the EU-27 average (23.8%) (Eurostat, 2024). Figure 1 visualises the data for all EU countries.

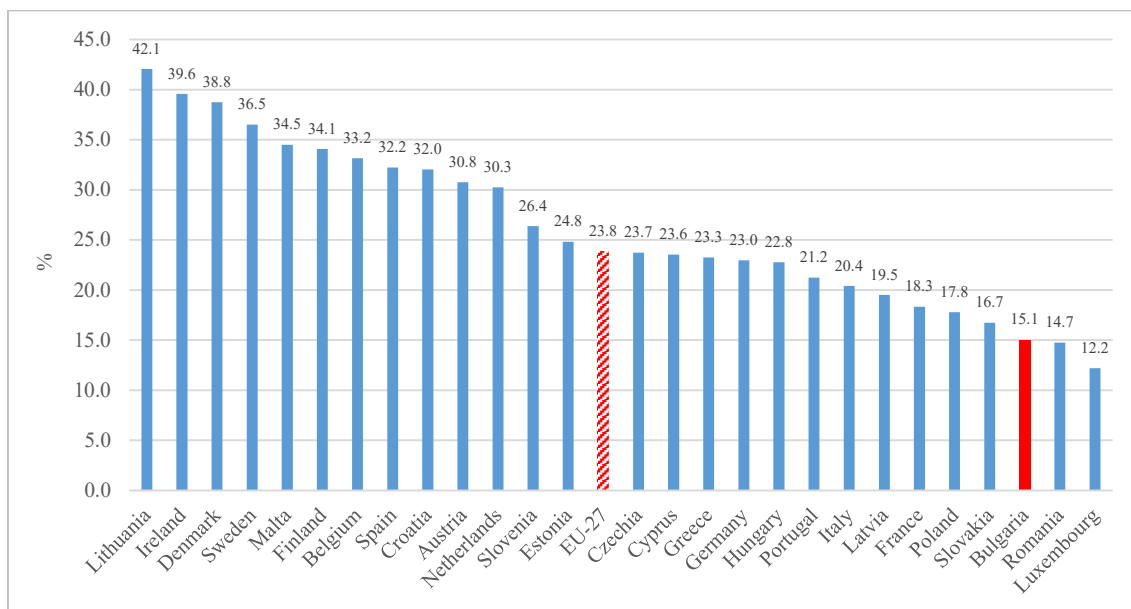


Figure 1. Relative share of e-commerce sales of enterprises in EU-27 in 2024.

Source: Eurostat. *E-commerce sales of enterprises by size class of enterprise.*

https://doi.org/10.2908/ISOC_EC_ESELS

In 2024, only 26.3% of *large enterprises* in Bulgaria will sell online, 19.5% of *medium-sized enterprises* and 13.9% of *small enterprises*. The values by which Bulgaria is more than 2.5 times behind the leaders in the respective groups – Sweden, where 65.6% of large enterprises sell goods and services online, and Lithuania and Ireland for small and medium-sized enterprises – 39.7% and 51.2% respectively (Eurostat, 2024).

When analyzing the enterprises in Bulgaria with online sales it is necessary to take into account the way the transaction is carried out. Enterprises prefer two ways – web sales via website or apps and EDI-type sales. Essentially, web sales are made through a developed own website or apps, namely: own online store; virtual Extranet platform; apps for booking services; mobile apps; PC apps. The other option is through online platforms used by businesses to buy and sell goods and services over the internet, such as Amazon, eMag, eBay, Glovo, Takeaway, Booking.com, Alibaba, TimoCom, etc. EDI-type sales include all orders placed by enterprise users via EDI-type messages for electronic data interchange. They are in an agreed or standard format so that they are suitable for fast automated processing. Specifically, these are: EDI-type orders that are created by the user's business system; orders that are forwarded via a dedicated EDI service provider; orders that are automatically generated by the user's business system; orders that are placed directly in the enterprise ERP system.

According to the monitoring data, in 2024 the relative share of enterprises in Bulgaria selling goods and services via *web sales* is only 13.9%, and those using *EDI-type sales* – 1.9%. These values

are 6.7 and 4.2 percentage points lower than the EU-27 average of 20.6% and 6.1% (Eurostat, 2024). In this context, the comparative analysis proves that there is a serious problem in the ratio of the parameters, as both indicators show an unfavourable lag behind the European average, which can hardly be compensated. A detailed breakdown of the data is presented through Figure 2.

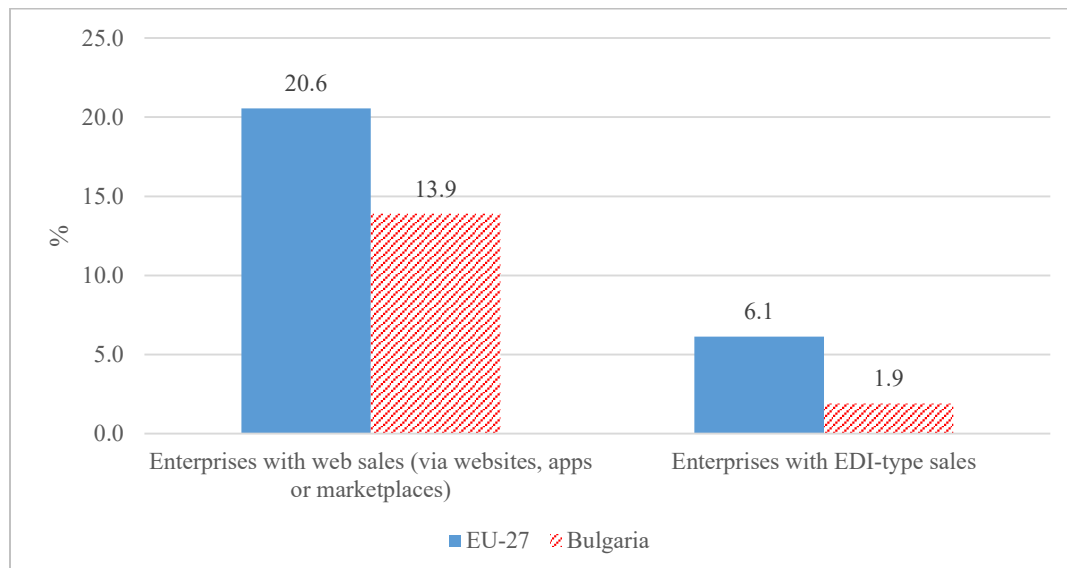


Figure 2. Relative share of e-commerce sales of enterprises in Bulgaria and EU-27 in 2024, by type of sales.

Source: Eurostat. *E-commerce sales of enterprises by size class of enterprise.*

https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_ESELS.

It is also negative that in the structure of enterprises making web sales in 2024, only 11.2% are selling goods and services through their *own website or apps*, and 6.7% through *online marketplaces* (NSI, 2024). This data is largely indicative that businesses are not able to take advantage of the opportunities presented by different online sales methods.

It is important to point out that the surveyed enterprises provide functionalities on their own website that are informative rather than facilitating and accelerating the purchase of goods (services), which turns the online visitor into an active online consumer (see Figure 3).

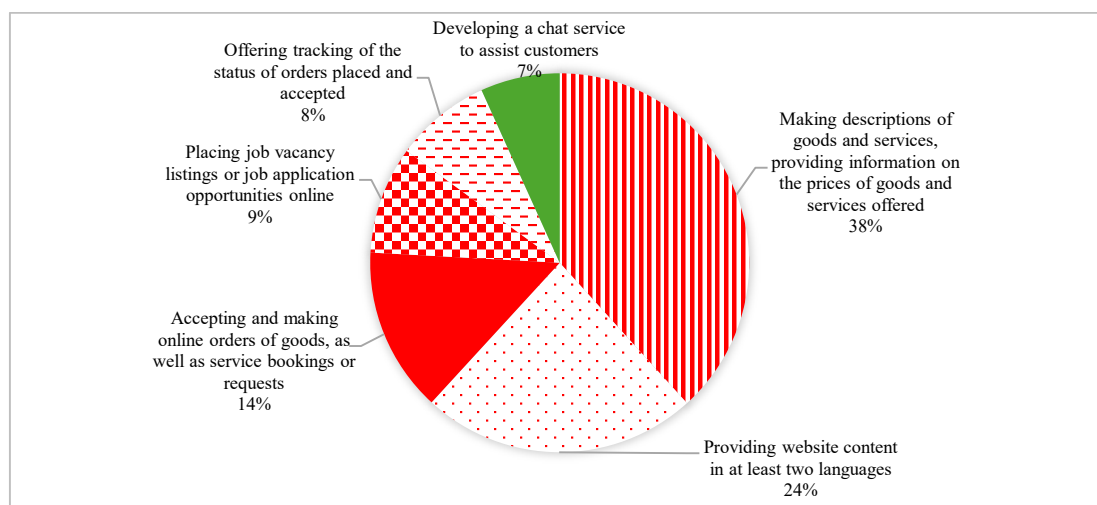


Figure 3. Features that enterprises in Bulgaria provide on their own website.

Source: National Statistical Institute.

The data in Figure 3 is indicative that businesses are not prioritizing their websites for sales or actively participating in online marketplaces, which limits the implementation of initiatives to streamline e-transaction operations or improve consumer relationships by offering the convenience and practicality of shopping anywhere, anytime.

Such behaviour has a negative impact on the value of e-commerce sales of Bulgarian companies. In 2024, the indicator will account for only 7.9% of total value of e-commerce sales, while the EU-27 average is 19.1% (Eurostat, 2024). On this indicator, Bulgaria ranks last among all member states (see Figure 4). This further puts businesses in Bulgaria in an unenviable position to influence consumers through their perceived online sales options. A comparative analysis of the data visualised in Figure 4 shows a poor performance of enterprises in Bulgaria with online sales.

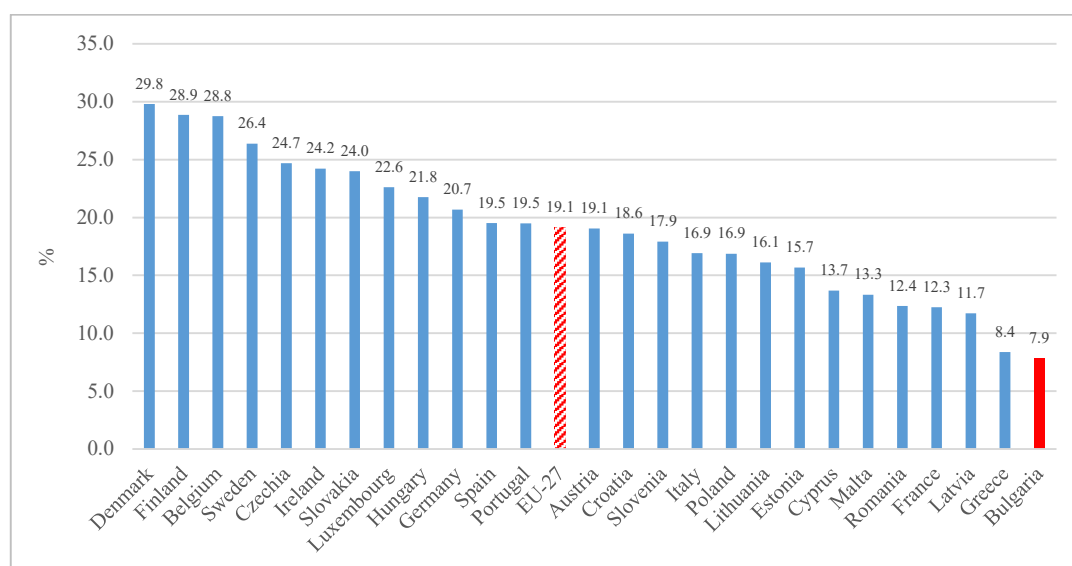


Figure 4. Relative share of value of e-commerce sales of enterprise in EU-27 in 2024.¹

Source: Eurostat. Value of e-commerce sales by size class of enterprise.

https://ec.europa.eu/eurostat/databrowser/product/page/ISOC_EC_EVALS.

The key benchmark of such behaviour is the fact that 13.7% of Bulgarian enterprises with web sales experience certain *difficulties, which are constantly accompanied by the emergence of diverse risks* (Eurostat, 2024). This objective circumstance should not be overlooked, as businesses are placed in specific risk situations.

In this respect, attention is focused on those explicit internal and external obstacles that have the most significant impact on the occurrence of risks. In particular for (Eurostat, 2024):

- ✓ 9.5% of businesses with online sales, the main problem is the *high costs of delivering or returning products*, which affects the expected results as well as their image and reputation;
- ✓ 4.3% – the leading issue is the difficulty in *related to resolving complaints and disputes*, causing controversy and creating uncertainty in relations with consumers;
- ✓ 1.8% – a real threat is the *adapting product labelling*, as well as *quality standards of products* meeting the standard requirements and parameters, according to the Regulations and Directives of the Union, which creates doubt and distrust in consumers;

¹ Data not available for the Netherlands for 2024.

✓ 2.9% – the *lack of knowledge of foreign languages* is considered as an immediate threat, which is among the parameters of primary importance, limiting market positioning and contractual relations;

✓ 1.7% – *restrictions from business partners* is a risky circumstance creating difficulties and inability to react quickly or adequately to the online market as well as to changes in the actions of market participants;

✓ 3.9% – the main obstacles are *related to the VAT system in EU countries*, especially in the calculation of the price and the emergence of unfair trade practices, which affects counter-agent behaviour.

Figure 5 visualizes the share of enterprises in Bulgaria that report obstacles for web sales according to their size.

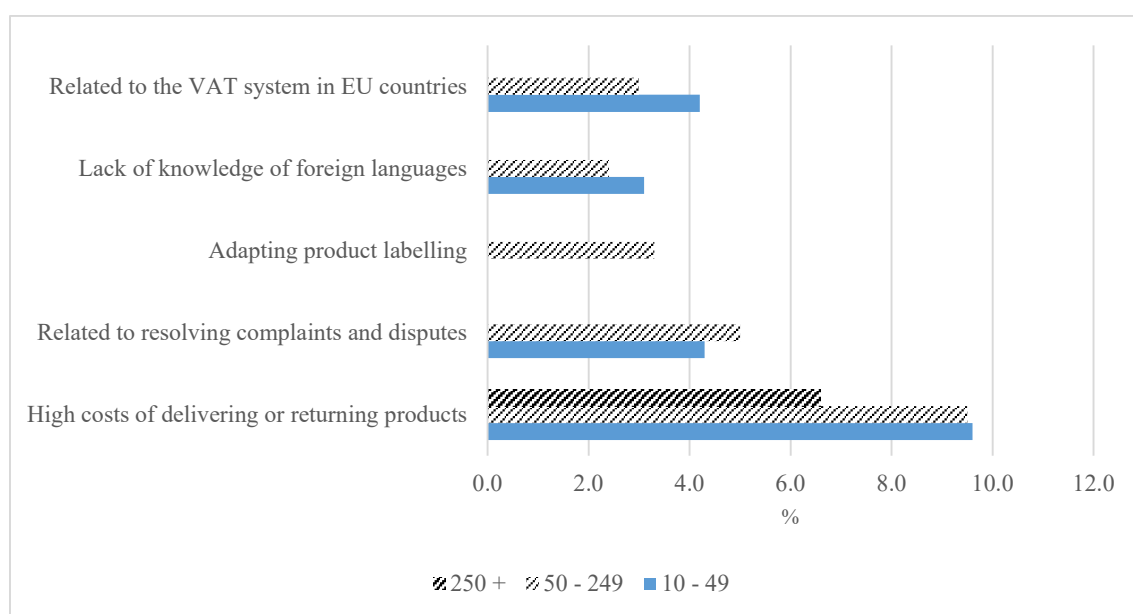


Figure 5. Relative share of enterprises in Bulgaria with obstacles for web sales by size class of enterprise.

Source: Eurostat. *Obstacles for web sales by size class of enterprise.*

https://doi.org/10.2908/ISOC_EC_WSOBS.

The data in Figure 5 shows that the highest proportion of *small enterprises* struggling to make web sales is 14.1%. *Medium-sized enterprises* came second with 12.5%, while the smallest share was 8.8% for *large enterprises* (Eurostat, 2024). This confirms the greater vulnerability of small and medium-sized enterprises in the face of challenges with a strong financial and consumer dimension that predetermine the risky nature of the online sales process.

CONCLUSIONS

On the basis of the diagnostics and the resulting findings, it can be pointed out that enterprises in Bulgaria with online sales have limited positioning. The differences between individual enterprises in terms of integration of digital tools and applications for goods exchange, as well as the degree of their actual implementation in online sales, are significant. There are a number of adverse effects and influences that increase the risk exposure of enterprises as they have a limiting impact and reflect on the emergence of serious challenges in the implementation of digital transactions.

In the light of these key findings, Bulgarian online businesses should continuously monitor and organise appropriate actions to mitigate risks and threats. They should promptly revise and reconsider the anti-risk methods and procedures that allow early identification of potential causes of their occurrence, as well as rapid mitigation of the development and change of risk parameters. Undoubtedly, in digital markets this is not an easy task, but its implementation leads to inevitable business success.

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