

LABOUR PRODUCTIVITY GAPS IN THE TRADE INDUSTRIES IN BULGARIA AND SOME EUROPEAN COUNTRIES²

In recent years the question of labour productivity has gained new relevance as a result of digitalization and economic crises, and their effects on the transformation of distributive trade business. The purpose of this study is to make a comparative analysis of labour productivity in the wholesale and retail trade in Bulgaria and ten countries of Central and Eastern Europe that have made the transition to a market economy and to bring out the trends and reasons for the labour productivity gap. The analysis is descriptive and mainly uses the outpace ratio to measure the productivity gap between Bulgaria and each of the countries through a comparison of two main indicators: turnover and gross margin per person employed. The data from Eurostat are used with a focus on the period between the two economic crises in 2008 and 2020-2021.

*Keywords: labour productivity gap; retail and wholesale trade; digitalization
JEL: M21*

1. Introduction

The distributive trade sector (wholesale and retail) is subject to significant changes – the increasing share of e-commerce, digitalization of trade operations and level of concentration. These structural and digital transformational processes as well as the large relative share of labour costs in the sector, the increasing rates of inflation and the governmental employment-related measures to curb the impact of the Covid-19 pandemic, have raised with a new relevance the questions about the efficiency of resources used, especially the place and role of the labour force and its productivity. The study of productivity at the industry level and the comparative analyzes per countries are important for both economic theory and policies. Understanding changes in labour productivity is essential for analyzing the state of the market structure and its evolution.

The interest in labour productivity, especially in wholesale and retail trade, is determined by the place of the sector in the Bulgarian economy. Despite the fact that the total number of persons employed in trade decreased in 2020 and reached values lower than those in 2007, the sector retained the second place, after manufacturing in terms of employment compared

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to the total number of persons employed in the country's economy in 2020 – 16.88% (NSI, 2022). The share of the services sector in GVA in 2020 was 70.7%, and the trade sector accounted for 21.22% of gross value added in 2020 by factor costs in the country against 19.56% in 2007. Therefore, the changes in labour productivity in the trade sector have a wide impact on the country's economy as a whole. The structural and digital transformation of the trade industry in Bulgaria began with the creation of modern trade after 2000, it was further stimulated by the economic crisis in 2008 and the current economic crisis in the conditions of the Covid-19 pandemic.

The purpose of this study is to make a comparative analysis of labour productivity in the wholesale and retail trade in Bulgaria and countries of Central and Eastern Europe that have made the transition to a market economy and bring out the trends and reasons for the labour productivity gap. The brief review of publications and documents devoted to comparative analyzes of the distribution sector shows that developed countries were primarily the subject of such analyses, and studies of comparative labour productivity in distributive trade in Central and Eastern Europe were limited. The countries in the sample (Bulgaria, Czechia, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and Slovakia) went through the transition stage from a centralized to a market economy. Their functioning as market economies started from approximately the same economic development, incl. of wholesale and retail trade and their labour productivity. Regardless of some differences between the countries' pre-transition stages, they transitioned from generalized excess demand (or shortage) to macroeconomic balance (McHale, 2001). All countries are currently members of the EU. The period of study coincides with the period of Bulgaria's membership in the EU, a period of harmonization of legislation and economic policies. The research period was marked by the idea of the development of a single EU retail market. In the last two years of the study period the countries from the sample also implemented economic and employment-related measures to reduce the impact of the Covid-19 pandemic.

International comparisons of trade labour productivity make it possible to understand how markets work in order to search for appropriate economic policies. It is the task of policymakers to ensure that firms, workers and consumers have the right incentives to invest, work and consume. Labour productivity is influenced by factors of the external environment, macro and micro, as well as internal company factors. This macro analysis focuses on the basic drivers of labour productivity in the trade sector – concentration, digitization, investment, labour intensity and cost. The importance of labour productivity gap problem is increasing as the intensity of trade competition increases after computerization and the opening of retail markets. The changes in the market environment, the expansion of the share of e-commerce and the importance of internal consumption in the conditions of a disrupted supply chain determine the importance of comparative analyzes of labour productivity in the trade sector.

The empirical analysis is descriptive and mainly uses the outpace ratio to measure the productivity gap between Bulgaria and each of the countries on a comparison of two main indicators for measuring labour productivity: turnover and gross margin per person employed in the wholesale and retail trade. The analysis used data from Eurostat with a focus on the period between the two economic crises in 2008 and in 2020. Empirical data are also

presented and analyzed, as well as a content analysis of documents, on the development of the sector in the period of the Covid-19 pandemic and the economic crisis of 2020-2021.

The study is structured in an introduction, four parts and a conclusion. The introduction defines the purpose and reasons for the research. The second part makes a brief review of the research on the comparative analysis of labour productivity in the wholesale and retail trade. The third part discusses the methodology of research and some methodological problems in the assessment of labour productivity in trade activity. The fourth part presents the results of the comparative analysis of labour productivity in the wholesale and retail trade in Bulgaria and countries of Central and Eastern Europe that have made the transition to a market economy. The fifth part shows the transformation processes in the trade industry and the basic reasons for the labour productivity gap. The conclusion summarizes the main findings of the analysis.

2. Literature Review

The productivity of resources, including labour, has been the focus of the states' policy and field for research. In recent years there has been an increased interest in the development of the retail and wholesale industry, including their productivity. A number of European Commission documents examine the importance of the distribution services that the trade sector provides for the EU economy. After the financial crisis and the following economic crisis in 2008 with an impact on 2009 economic developments, the decrease in the productivity of the distributive sector was one of the reasons for the intensity of analyses, forums, preparation, discussion and adoption of reports, resolutions and a general plan for the development of retail trade. In 2010 the retail market monitoring report "Towards More Efficient and Fairer Retail Services in the Internal Market for 2020" was prepared (European Commission, 2010). In 2011, a resolution of the European Parliament for a more efficient and fair retail market was adopted (European Parliament, 2011).

Considering the role of trade in stimulating growth and creating jobs in the economies of EU countries and in line with the Europe 2020 strategy, the European Commission approved a new European Action Plan in the field of retail trade (European Commission, 2013). The plan includes a strategy to improve the competitiveness of the retail trade sector and increase its economic, environmental and social efficiency. It lays down main priorities, including the creation of a better working environment and better matching the needs of employers and the qualifications of employees. The priorities derived are a consequence of the realization that trade operates in a socioeconomic context in which strategic choices affect the wealth of many citizens. The single retail market expands the choice of consumers in Bulgaria. For local companies, it provides new opportunities, but it is also associated with numerous challenges – primarily resulting from the growing intensity of competition. It is the result, on the one hand, of the slow growth rates of sales after 2008, and on the other hand, of the entry of innovative foreign competitors, as well as the ever-increasing digitalization of trade and the entry of new market actors. The development of digital transaction platforms provides opportunities to sell in other countries, but also expands competitors' access to the domestic consumer goods wholesale and retail market.

It was pointed out at the World Retail Congress in September 2021 that small and large retailers suffered from historically low margins, they needed government support to invest in digitalization and achieve sustainable development (EuroCommerce, 2021). In 2021, at the request of the US Bureau of Labour Statistics, specialists from the National Academies of Sciences in the US prepared a report to assess changes in the retail trade sector, measures of employment and labour productivity (National Academies of Sciences, Engineering, and Medicine, 2021). At a conference of the National Retail Federation of USA (NRF) in January 2022, the main trends in the development of retail trade were discussed, including omnichannel, problems in the supply chain and labour wages (NRF, 2022).

Differences in distributive trade sector labour productivity between individual national economies have been the subject of research and assessment. The brief analysis showed that researches were mainly devoted to comparative analyzes of the distribution sector in developed countries. The distribution sectors of the USA and EU were more often the subject of research (Timmer et al., 2004). According to a report by the US Bureau of Labour Statistics, labour productivity in the USA increased and annual productivity growth for retail trade in 2020 was the highest since measurement began in 1987, while output in wholesale trade decreased for the first time since 2010 (US Bureau of Labour Statistics, 2022). There were differences in the rates of development of labour productivity in two related economies: Canada and the USA (Rao et al., 2008, p. 164) and a widening of the labour productivity gap. Although there are differences between the authors, they are united around the thesis that labour productivity in Canada was significantly lower than that in the USA. While there is a large body of research on the analysis of internal firm factors affecting productivity, the analyse of external ones is more limited. Some of them focused on specific local factors such as country population density, average store size within countries, foreign trade ratio, concentration, economic freedom and percentage of urban population (Roche et al., 2019, pp. 774-792), and in others, the subject of analysis were local competitive conditions (Hernant et al., 2007, pp. 912-935). These studies were related to the evaluation of the factors determining the attractiveness of a given country's retail and wholesale sectors for investment.

Griffith and Harmgart analyze UK's productivity gap in the retail sector which shows that the UK lies well behind the US, France and Germany (Griffith, Harmgart, 2004). The UK's poor performance in terms of productivity compared to the US was the focus of government policy in the budget analysis. Comparative research on labour productivity in the retail sector in the UK, Germany, France, and the Netherlands (Cox et al., 2016) shows significantly higher levels in the UK and France compared to the average for the EU 28 and the rest of the countries in the sample. One of the reasons explaining the labour productivity gap in the commercial sector by country was the different development of e-commerce, the share of which among European countries during the study period was the highest in the UK. The UK has the most advanced e-commerce market in Europe. In 2022, the country was expected to have nearly 60 million e-commerce users (Statista, 2022). The rates of development of labour productivity in the trade sector differ significantly by sectors and countries. The lower level of productivity in the trade sector compared to other economic sectors is mainly explained by the labour-intensive nature of many distribution services, especially retail (Cox et al., 2016). The other explanation of weak labour productivity is the size of firms which make up the retail and wholesale sector, basically small and medium-sized enterprises (SMEs), which

have lower labour productivity with less managerial experience, lower opportunities for investment, implementation of new technologies and staff training. Another major factor that is the subject of research for differences in labour productivity between sectors is investment growth.

Unlike the many comparative studies of labour productivity in the wholesale and retail trade in developed countries, comparative analyzes for Central and East Europe countries were limited. Some evaluated the labour productivity in distributive trade in the process of accession of countries to the EU. For example, there was an analysis of labour trade sector productivity in Poland, Hungary, Czech Republic and Slovakia and EU-15 countries (Rozas and Diaz, 2003, pp. 7-24). The European Commission did a comparative analysis of sectoral productivity, including wholesale and retail, by EU countries (European Commission, 2001), (Murakozy et al., 2018). Changes in turnover per employee were the subject of research as part of the EU 27 wholesale and retail trade survey (Knezevic et al., 2011, pp. 34-49) and the EU-28 economic growth survey (Mladenovic et al., 2019, pp. 489-506). Usually, the comparative analyzes of research countries were for the service sector as a whole with a brief presentation of the trends in the distributive sector (Bauer et al., 2020).

3. Methodology of Research

Much research has been devoted to the methods and indicators of labour productivity analysis, particularly in the wholesale and retail trade. The measurement of productivity as a ratio between outputs to inputs raises three main groups of problems: 1) selection of indicators for measuring the output of trade activity; 2) selection and measurement of input resources; 3/ choice between applying indicators to evaluate the productivity of individual resources, including labour, and deriving relationships between them that show the efficiency of retail and wholesale activity and/or using multi-factor productivity indicators.

The scientific discussion of what the output of retail and wholesale trade is, and the related discussion of the statistical measurement of the economic output of trade at the national economy and economic sector level, dates back to the beginning of the last century. Many specialists support the statement "that, the definition and measurement of retail output cause more difficulty than retail input" (McAnally, 1963, p. 88). The problems stem from the difficulty in quantifying the distribution service that retail and wholesale trade provide. Defining the outcome of distributive trade continues to be an object of analysis by many authors (Rosenbloom, 2010, pp. 7-55; Ratchford, 2016, pp. 54-72; Zentext et al., 2017, pp. 3-23), and extensive research is currently being conducted by Betancourt (2004, 2020). The transformation process in commerce is resale or exchange. Trade firms are part of marketing institutions, but as an economic activity commerce is a broader concept than marketing, which is only one of the functions in a given trade business and one of the flows of the exchange. In order to make the purchase for the purpose of resale, it is necessary to implement various processes. The concept of channel flows (Rosenbloom, 2010, p. 8) describes the distribution channels as a system of eight flows: product, ownership, promotion, negotiation, financing, risk, ordering and payment flows. This broader understanding of commerce as an environment for conducting business is enshrined in the Commercial Law and the Law on

Electronic Commerce, according to which, electronic commerce is the provision of services to the information society. E-commerce is the integrating part of business processes.

The empirical analysis in the present research is descriptive and involves arranging, summarizing and presenting a set of data. Each of the indicators for measuring the economic effect of trade activity – turnover, gross margin, value-added and profit has advantages and limitations that make it more or less applicable at different levels of research – store, company, region and national economy. We use two main indicators for measuring labour productivity: turnover and gross margin per person employed in the wholesale and retail trade. Turnover presents the volume of sales. An advantage of the turnover is that it excludes VAT and other similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods or services invoiced or it is not affected by policies in the field of direct taxes and fees. But the application of turnover in comparative analysis is limited by the differences between individual national and regional commodity markets. Within a regional market, differences can be observed in the volume of sales revenue by trade areas and, therefore, in labour productivity. The most important factors determining the specifics of supply and demand are the differences in the intensity of competition and the purchasing power of consumers. There are proposals to use the number of transactions instead of turnover in value terms as a measure of effect. Of course, this indicator suffers from the same imperfections as the volume of turnover in value terms (for example, the share of market consumption in different countries), but it also hides others such as the size of the consumer basket in one transaction.

Gross margin, or the difference between sales revenue and cost of goods sold, adjusted for changes in inventory, is a more reliable measure of business performance than turnover. The gross margin on goods for resale shows the market power of the retailers and wholesalers horizontally and vertically. It is the price of the commercial service. The production process in trade is resale. "The resale includes a number of actions which might be undertaken to make goods available for buying including negotiating transactions between buyers and sellers or buying goods from the manufacturer on own account, transporting, storing, sorting, assembling, grading, packing, displaying a selection of goods in convenient locations" (United Nations Statistical Commission, 2007, p. 15). These actions can be organized or combined in different ways, especially with the development of digitalization. In this way, the effects of digitalization deepen the discussion of what constitutes and how to measure the output of retail and wholesale activities.

One of the current active advocates for the development of the economics of retail and wholesale is Betancourt, who considers distribution service as composed of 5 main elements: location (access to the point of sale), selection and presentation of the assortment, information, delivery and ambience (Betancourt, 2004, pp. 17-20). This understanding of the product of trade activity supports the thesis that gross margin or the cost of trade service should be used as the main measure of the effect of wholesale and retail trade. Absent or largely weak competition, other things being equal, ensures that when a retailer does not invest in serving their customers and marketing costs are low, gross profit will be high. With strong competition, the merchant must show skill and effort to provide greater utility to their customers at a lower price at the expense of a lower level of gross profit. In this case, in comparative analyses, gross profit is not a sufficiently reliable measure of labour productivity

and other used resources. In the sectoral analyses, in addition to these indicators, value added (gross output minus the value of all inputs originating as the output of other firms) is also applied.

The other problem in performance evaluation is related to the measurement of input resources. Manpower is the main production resource that activates other resources and manages the process of production and distribution of goods and services. The labour market offers the ability to work under conditions determined for each specific situation. This ability to perform a certain labour activity is the property of a specific individual. Once acquired, labour property cannot be transferred to another entity as a result of an agreement, unlike intellectual property. Regardless of the presence of market relations, human capital is unsellable and remains the eternal property of its owner. When concluding an employment contract, the subject of negotiation is the workforce, or the ability to influence the other factors of production. Therefore, the most commonly used measures of labour input are the number of personnel and/or man-hours worked. Difficulties arise when trying to value the work involved. The initial costs of hiring and training the workforce do not represent the full amount of the investment. The US Bureau of Labour Statistics applies a multi-factor productivity index that includes capital and labour as inputs, “and costs of these inputs as a share of the total cost”, as well as an index of labour productivity per hour worked (Ratchford, 2016, p. 55).

As a result of the above, for the purposes of this study, labour productivity is measured by the turnover and gross margin divided by the number of workers. Due to the use of temporary statistical series and the possible presence of autocorrelation in the data, the labour productivity gap is measured by the outpace ratio (labour productivity in the Bulgarian trade industry divided by the labour productivity of each country from the sample). When the values of the coefficient tend to be 1, this indicates a reduction in the labour productivity gap. The analysis used data from Eurostat with a focus on the period between the two economic crises in 2008 and 2020-2021. Transformations in trade industries with a focus on concentration, digitization, investments, labour intensity and costs are considered the main driver for changes in labour productivity. A coefficient of overtaking of investments in the trade industries in Bulgaria compared to other countries has been calculated.

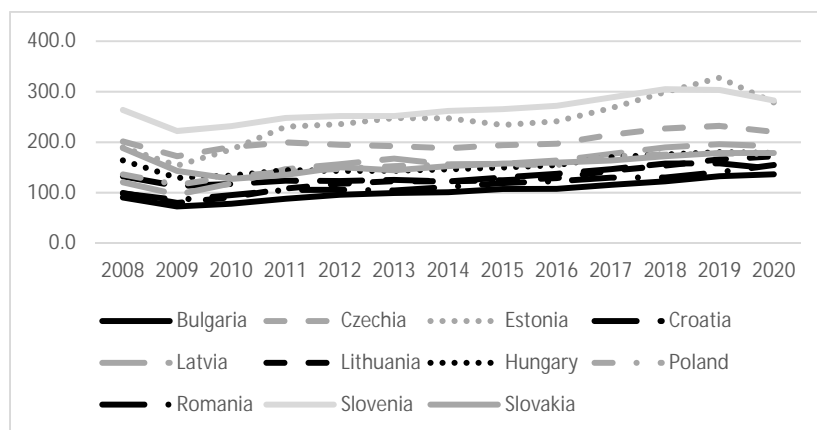
4. Comparative Analysis of Labour Productivity in the Wholesale and Retail Trade in Bulgaria and Some Countries of Central and Eastern Europe – Results

Data on turnover and employment in the trade sector demonstrate its role as an indicator of the economic cycle. After the crisis starting in Q4 of 2008 with an impact on 2009 economic developments, there was a decline in the indices. The deflated turnover (2015=100%) and volume of sales in the wholesale and retail trade (annual data) show that in the countries of the sample, the effects of the crisis manifested themselves mainly in 2009 and 2010, when a decrease in the volume of turnover was noted (Eurostat, 2022). Exceptions were Estonia and Hungary, where the decrease in the indicator had already been reported in 2008. Only Poland had almost continuous growth of the annual index of sales in the trade industry during the period. At the beginning of the period, Bulgaria, followed by Poland, had the lowest level of

retail trade concentration (see Figure 3). The crisis in the conditions of the Covid-19 pandemic was significantly less reflected in the trade sector in the sample countries compared to its effect in Greece, Spain and Italy, which relied to a significant extent on tourism revenues and related trade with consumer goods. The researched countries recorded significantly higher annual sales index of turnover in 2020 and 2021 (deflated 2015=100%) compared to the EU 27 average, except Czechia, which was with an index below the average throughout the studied period. Some of the reasons were the relatively less developed financial sector, higher growth rates, the lower dependence on foreign markets and the relatively high growth rate of e-commerce development. The sampled countries also registered a significantly higher average monthly index of retail turnover in 2020-2022 according to Eurostat.

The development of employment in the trade industry during the period under study differed significantly from that of sales. In six of the countries (Romania, Hungary, Slovenia, Poland, Estonia and the Czech Republic), the annual index in 2020 compared to 2019 remained positive with the highest rate in Romania (114%) and the lowest in the Czech Republic (101.5%). Its values were relatively lower than those of sales dynamics. The most significant was the decrease in the annual employment index in Latvia (-4.1%), followed by Estonia and Bulgaria (-3.4%). The biggest impact was undoubtedly the restrictions in the conditions of Covid-19 and the changes in the behaviour of consumers, leading to an increase in online sales and the closure of physical outlets. In 2021 Czechia, Poland and Slovakia, and in 2022, Bulgaria (-1.2%), Czechia (-0.4%) and Latvia (-0.3%) saw a reduction in staff, while in the others it remained at the same level or increased slightly as a result of the recovery of consumption and effectiveness of employment-related measures (see Table 2).

Figure 1. Labour productivity in the wholesale and retail industry (turnover per person, thousand euro)



Source: Eurostat and author's presentation.

In all countries, labour productivity in the sector fell in 2009, after which it slowly recovered. According to the values of the turnover per person in the wholesale and retail trade, the

countries of the sample could be divided into three groups. The first group with the lowest values of the indicator during the research period included Bulgaria 136.4 thousand euro and Croatia 147.6 thousand euro, followed by Romania 154.9 thousand euro. In five of the countries (Poland, Slovakia, Hungary, Latvia and Lithuania), the index had values between 172.0 and 192.4 thousand euro, and the highest was in the Czech Republic 220.6 thousand euro, Estonia 278.8 thousand euro and Slovenia 282.6 thousand euros. Regardless of the constant growth of labour productivity in Bulgaria's trade sector after 2009, its level remained the lowest compared to other sampled countries throughout the entire period (see Figure 1).

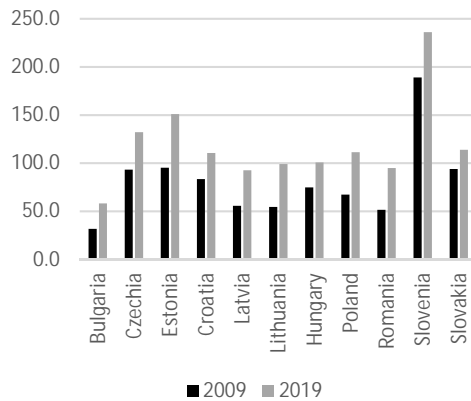
Some of the reasons were the size of the market and its competitive structure, characterized by a large number of small and medium distribution and retail firms (see Figures 2 and 3). The turnover per person employed in enterprises with 250 persons or more in Bulgaria almost reached the average for the studied countries (200.5 thousand euro) in 2020 and ranked after Czechia, Hungary, Poland and Slovenia. However, the labour productivity of small enterprises, for example from 2 to 9 persons employed, in the trade sector in Bulgaria (83 thousand euro) remained lowest in the sample countries. Despite the improved financial control, one of the reasons can be found in the actually reported revenues in small, especially family businesses.

Productivity levels in the wholesale and retail trade differ significantly. Labour productivity in retail trade declined in all countries until 2009, after which it slowly recovered (see Figure 2). An exception to this trend was observed in Slovenia, where productivity was twice the average for other countries, but in 2020 it returned to the 2008 level. The process of retail concentration continued during the study period. The level of concentration was highest in Slovenia, Croatia Estonia and Czechia, where the level of labour productivity was also higher. The large chains had the resources to attract consumers, implement new technologies and specialization in labour. The level of concentration was the lowest in retail trade in Bulgaria, however, its growth rate was much larger than the average (see Figure 2 and Figure 3).

Understandably, labour productivity in the wholesale trade was significantly higher due to higher turnover volumes. But here it should be pointed out that in terms of labour productivity in the wholesale trade, Bulgaria did not come last in the sample, in contrast to retail trade. In Bulgaria's wholesale trade, labour productivity was only 1.8 times lower than that of Estonia, the country with the highest level.

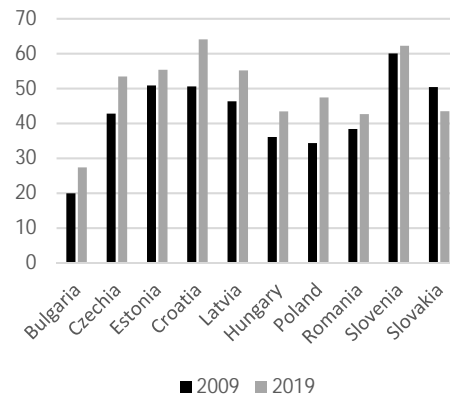
Through the outpace ratio, the relationship between labour productivity (turnover per person in the wholesale and retail trade) in Bulgaria compared to each of the countries was measured. The most significant were the differences between Bulgaria on the one hand and Slovenia, Estonia and the Czech Republic on the other. Labour productivity in the trade sector in Slovenia was about 3 times as high as that in Bulgaria at the beginning of the period (outpace ratio was 2.91 in 2009 and 3.05 in 2010), after which it gradually decreased and in the period of the current crisis in 2020 it reached 2.07. There was a convergence between the productivity levels in Bulgaria and the Czech Republic, the coefficient decreased from 2.67 in 2011 to 1.75 in 2020. In the recovery period between the two crises, the outpace ratio of labour productivity in Bulgaria compared to that in Estonia increased, but in the crisis period in 2020, it decreased to 2.04 and reached values characteristic of the beginning of the period.

Figure 2. Turnover per person employed in retail trade, thousands of euro



Source: Eurostat and author's presentation.

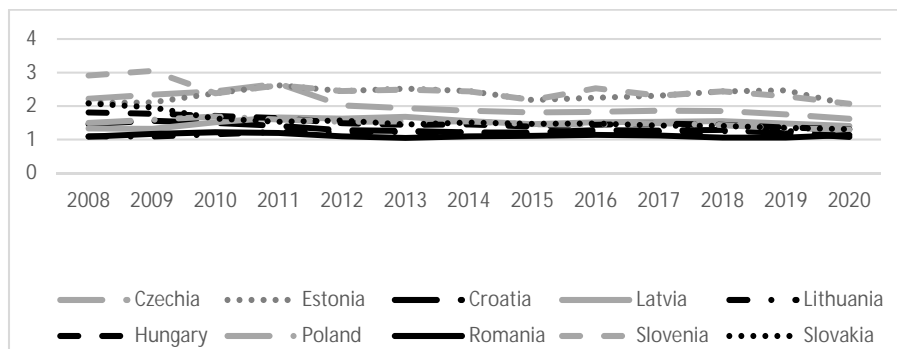
Figure 3. Percentage of turnover in retail firms with more than 250 persons



Source: Eurostat and author's calculations and presentation.

The growth rate of labour productivity in Bulgaria and Romania was approximately the same during the studied period, and thus the productivity gap is expected to remain. The outpace ratio was the lowest and ranged between 1.22 and 1.05. Compared to the rest of the countries, the values of the labour productivity gap were lower and, in general, showed a decreasing trend with fluctuation by year and country. It is clearly visible that the convergence increased during periods of economic crisis and decreased during economic recovery (see Figure 4). This can be explained by the greater integration of the markets of the more developed countries of the sample and the stronger effect of the crises on their trade sectors compared to those in Bulgaria. The latter was also influenced by policies undertaken by governments that were similar in their economic content (see Table 2).

Figure 4. Outpace ratio* of turnover per person employed in Bulgarian wholesale and retail trade compared to that in countries from Central and Eastern Europe



*When the values of the coefficient tend to 1, this indicates a reduction in the labour productivity gap.
Source: Eurostat, author's calculations and presentation.

The productivity of retail staff measured by a gross margin on goods for resale per person employed in Bulgaria was also the lowest by a significant margin among the countries in the sample, followed by Romania. With the highest values again, as well as according to the turnover per person employed indicator, were Slovenia – 42,258 thousand euros, the Czech Republic – 33,529 thousand euros and Estonia – 32,882 thousand euros. There was a positive trend in reducing the difference between Bulgaria and the most developed country, Slovenia, from 6.07 times in 2008 to 4.06 times in 2019. At the fastest pace, productivity on a gross margin basis was growing in Romania, followed by one in Bulgaria, with the difference between the two national retail sectors increasing.

The gross margin on goods for resale in the retail trade as a percentage of turnover grew during the period in all countries, which is proof of the importance, place and role of the trade industry (see Table 1). In 2008, this index was lowest in Bulgaria – 15.47% and Romania – 15.51%, and it was at its highest in Croatia – 23.92% and Lithuania – 23.86%. At the end of the period, the gross margin on goods for resale in retail trade, as a percentage of turnover was 26.25% in the retail trade in Lithuania, followed by the Czech Republic – 25.52%. The indicator showed the differences between the market power of the retailing in individual countries decreased. The growth of the index is the highest in Romania, followed by one in Bulgaria and reaching 24.82% and 20.18% respectively in 2019. Only Poland was an exception, where the index was 16.53% at the end of the period. The values of the index were the result of the differences in the size of the retail market, the level of concentration of the trade business and the fragmentation of the retail industry.

Table 1. Wholesale and retail trade productivity (gross margin per employee)

Country	Wholesale trade						Retail trade					
	gross margin %*		productivity (thous. €)		outpace ratio		gross margin %		productivity (thous. €)		outpace ratio	
	2008	2020	2008	2020	2008	2020	2008	2020	2008	2020	2008	2020
Bulgaria	11.25	13.54	20.28	38.20	1.00	1.00	15.47	19.83	5.86	12.13	1.00	1.00
Czechia	13.10	13.93	46.21	48.23	2.28	1.26	20.87	25.58	21.88	33.12	3.73	2.73
Estonia	13.18	13.64	40.29	72.28	1.99	1.89	19.00	22.50	20.02	34.26	3.41	2.83
Croatia	31.42	19.85	56.47	42.98	2.78	1.13	23.92	24.53	22.06	26.18	3.76	2.16
Latvia	14.99	15.89	34.61	64.63	1.71	1.69	19.80	25.29	12.92	24.07	2.20	1.99
Lithuania	20.32	21.44	36.14	68.17	1.78	1.78	23.86	26.32	14.63	27.10	2.50	2.23
Hungary	16.30	20.60	48.92	67.12	2.41	1.76	17.67	22.88	14.90	24.00	2.54	1.98
Poland	-	11.14	-	31.16	-	0.82	-	16.22	-	18.53	-	1.53
Romania	14.60	19.63	21.98	43.75	1.08	1.15	15.51	25.42	8.79	25.46	1.50	2.10
Slovenia	16.47	16.80	51.20	59.03	2.52	1.55	16.83	22.66	35.57	47.88	6.07	3.95
Slovakia	13.57	14.02	33.40	36.89	1.65	0.97	18.33	22.38	21.77	26.51	3.71	2.19

*gross margin (the difference between sales revenue and cost of goods sold) as a percentage of turnover.

Source: Eurostat and author's calculations.

The gross margin on goods for resale in the wholesale industry showed growth in all studied countries. There was a tendency to decrease the labour productivity gap between Bulgaria and other countries. In 2008, the indicator in the wholesale industry in Bulgaria was 2.78 times lower than the indicator for Croatia, the country with the highest level of labour productivity, while in 2019 the outpace ratio compared to the first country, Latvia, was 1.82 times. At the end of the period, the indicator had the lowest value again in Bulgaria, followed

by Romania, but in the latter, the growth of the indicator was slightly higher, which led to an increase in the difference between the wholesale industries in both countries.

According to the total volume of turnover and gross margin, or the income from wholesale services, Bulgaria was in fifth place among the countries studied. The differences between the countries on the indicator gross margin as a percentage of turnover in the wholesale industry were significantly smaller compared to the retail trade sector, with the exception of Croatia, where the indicator was higher – 31.42 % at the beginning of the period, but after gradually falling to 19.42 %. The lowest level of the indicator was in Poland – 10.87 %, followed by Estonia – 12.10 % and Bulgaria – 12.78 %. The outpace ratio between Bulgaria and Hungary in 2019 was 1.61. The geographical location of Bulgaria and the development of transport and logistics determined the higher productivity of the wholesale trade.

5. The Transformation of the Trade Industry as a Basic Driver for Labour Productivity

Trade industry structural and digital transformation processes are at the heart of workforce restructuring in wholesale and retail trade. Those processes affect staffing requirements – volume, structure, qualification, work organization and income. After studying (in the previous part) the trends in labour productivity development, including the impact of trade industry concentration, in this part, the macro-analysis examines the drivers of labour productivity in the trade sector as digitalization, investment, labour intensity and governmental policies to overcome the impact of Covid-19.

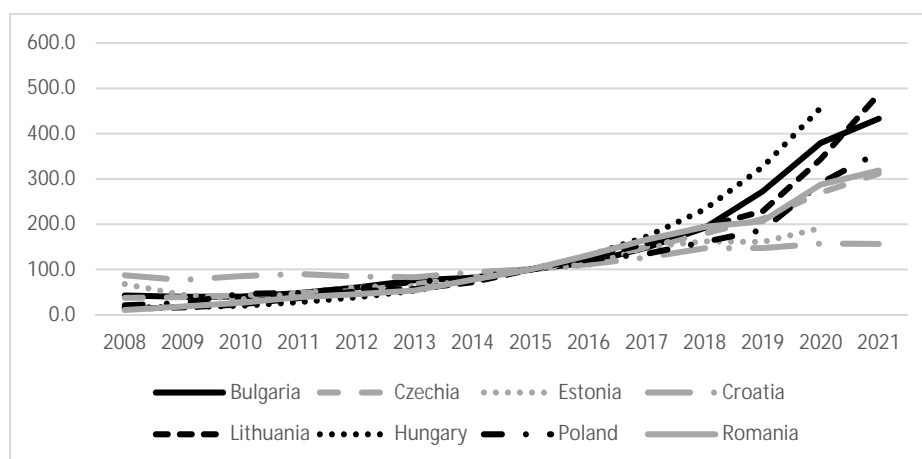
First digitalization goes deeper and deeper in trade operations and fundamentally changes exchange, buying and selling, and communication between market agents. Digital innovations lead to a restructuring of the economy, the emergence of new commercial intermediaries providing digital services, the interpenetration of existing forms of online and offline trade and the creation of new ones in an omnichannel environment, convergence and integration between economic sectors and functions in the business organization.

E-commerce is a major source of trade sector development and productivity for all countries in the sample. With the introduction of e-commerce, the size of the potential market and the range of products available to market participants, manufacturers, commercial intermediaries and consumers, are expanding. Figure 5 shows the significantly higher growth rates of retail sales of companies specializing in sales via mail order houses or via the Internet (G4791 according to NACE rev.2). The development of this subsector was faster than the one in the trade sector as a whole and the index was highest in Lithuania (486.7% in 2021 compared to 2015), followed by Bulgaria (433%). The labour productivity in e-retail is higher than in retail trade as a whole for most countries in the sample except Slovenia, Hungary and Latvia (Eurostat, 2022).

The increase in the share of consumers ordering via the Internet during the research period was significant, but in Bulgaria, it remained the lowest (see Figure 6). Changes in consumer demand as a result of the Covid-19 pandemic, problems in the supply chain of consumer goods and subsequent inflation, had a significant impact on the trends in the trade industry

over the last two years. The indicated factors led to an increase in electronic sales and the relative share of purchases from sellers³ registered in Bulgaria from 90% in 2020 to 96.15% in 2021, with the lowest values of the indicator on an annual basis in 2011 – 72.7% (NSI, 2022). The reason for the latter was also the changes in the registration and control over the activity of electronic stores. In 2021, the share of the population in Bulgaria that purchased goods on the Internet from sellers from other EU member states decreased to 29.7%, while the highest value of this indicator on an annual basis was 49.2% in 2013. The relative share of purchases from non-EU sellers was also decreasing, in 2021 it was 16.5%, with the highest share at the beginning of the researched period in 2008 and in 2019 – 19.1%. Eurostat developed a data collection methodology for the EU labour force survey in the context of the Covid-19 crisis (Eurostat, 2020) and in 2021 new methodology for the EU labour force survey to increase its comparability across EU Member States (Eurostat, 2021).

Figure 5. Index of deflated turnover in retail via mail order houses or via Internet 2015=100%



Source: Eurostat and author's presentation.

The importance of e-commerce to GDP is measured by the indicator e-GDP. In Europe, the value of the indicator was highest in the United Kingdom (Statista, 2022). E-commerce spending as a percentage of total GDP in some countries from the sample was: Estonia – 8.22%, Poland – 4%, Czech Republic – 3.2%, Hungary – 3%, Romania – 2.56%, Bulgaria – 2.14, Slovakia – 2%. Comparing e-GDP with labour productivity in the retail sector shows that the countries with the highest productivity also achieved the highest share of e-commerce in GDP as Estonia, Czech Republic and Poland.

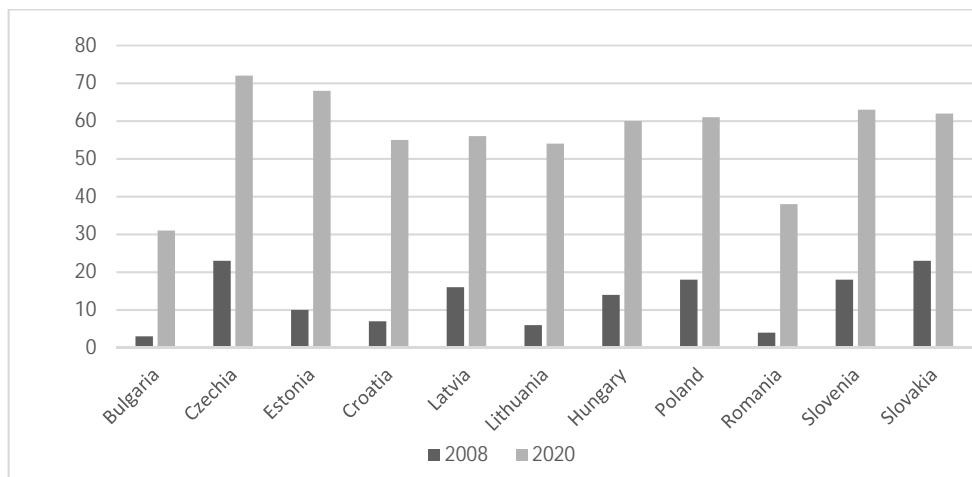
It should be noted that in the mentioned countries the share of ICT in GDP was relatively higher than the EU average of 4.89% in 2019 according to Eurostat. This share was highest in Bulgaria at 6.62%, Hungary at 6.13%, Estonia at 5.98% and Latvia at 5.41%. This can be

³ The relative share was calculated on the basis of the number of persons who bought goods and services on the Internet in the last 3 months.

interpreted as an indicator of a decrease in the labour productivity gap between the trade sector in Bulgaria and the other countries. Therefore, the effects of the digital transformation of the trade industry and the economic crisis in the conditions of a pandemic overlapped and were interdependent.

Investments per person employed were another important factor in the development of the wholesale and retail trade industry. At the beginning of the period, the dispersion between countries was significantly greater and four of them had investments per person employed levels lower than those in Bulgaria, the outpace ratio was lower than 1 (see Figure 7). At the end of the period, all countries were ahead of Bulgaria (the outpace ratio was greater than 1), which may lead to preserving the labour productivity gap in the future.

Figure 6. Internet purchases by individuals (percentage of individuals)



Source: Eurostat and author's presentation.

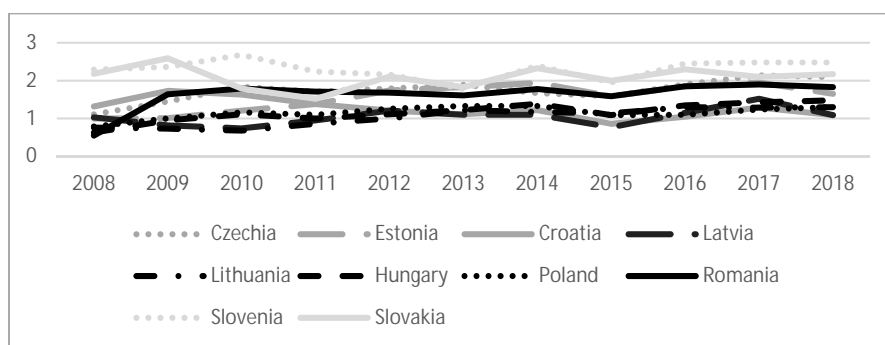
Digitalization promotes convergence and integration between retail and wholesale trade services, as well as their interaction with other services – financial, information, marketing and logistics, related to certification, conclusion and execution of transactions, which in the long term leads to changes in the retail and wholesale product. The development of commerce in a digital environment respecializes the provision of commercial services. On the one hand, digital service providers begin to perform distribution functions and become commercial intermediaries, and on the other hand, new trade intermediaries appear in the process of commercialization of innovations. Therefore, digitization affects the amount of gross margin and gross value added in the trade sector.

Retailers and wholesalers are beginning to include additional services to their core business of reselling goods. New supply chain intermediaries are emerging, providing omnichannel technologies and support services related to order fulfilment and other customer service activities. Some retailers are significantly reducing retail space and developing new store formats to offer less space for product display and consumer familiarization with the assortment at the expense of space to fulfil e-orders. In this way, retail outlets begin to act as

mini retail distribution warehouses (Snelling, 2022) to serve customers in the shopping area of the outlet.

The collaboration between retailers and wholesalers is growing. The big retail chains are commercializing their delivery platform and are starting to offer e-commerce platforms to small and medium-sized retail businesses (D'innocenzio, 2021). This is part of a partnership with digital technology providers. Retail chains transport products of competing retailers directly to their customers, making them competitors to logistics and courier service providers. Large retail firms are moving towards diversification of their product, and into advertising, financial services, information services, logistics, etc., as well as increasing the productivity of their existing sales space.

Figure 7. Outpace ratio* of investment per person employed in Bulgarian wholesale and retail trade compare to countries from Central and Eastern Europe



* When the values of the coefficient tend to 1, this indicates a reduction in the labour productivity gap.
 Source: Eurostat, author's calculations and presentation

The digital marketplace platforms blur company boundaries and create a network effect – they connect customers, manufacturers, traders, lawyers and facilitate interactions between them. Marketplace, electronic platforms, change the logic of transactions in retailing and wholesaling and represent a higher form of cross-functional integration. Participants in electronic platforms have an advantage over other competitors in the retail sector in terms of access to a large number of customers, their research, the processing of large databases, as well as the use of logistics services, guaranteeing the quality of goods, payments, etc. Platforms themselves are a kind of business model and need marketing positioning. Blockchain technology and the so-called smart contracts built on top of it are transforming the way retailers and consumers interact – ordering, transacting and transferring ownership rights.

Second, the economic crisis is manifested by rising levels of consumer goods inflation and a reduced propensity to consume, which causes managers to put focus on cost reduction. In the retail industry, labour costs become second in total costs following costs of purchasing goods sold. During the period, the ratio between personnel costs and total purchases of goods and services in the trade of the sampled countries increased, with the exception of Estonia only. The average value of the indicator for the EU was 9.8% in 2019. The largest growth of this

share was in Bulgaria – 196% in 2019 compared to 2007 or twice, but nevertheless the ratio of the personnel costs in Bulgarian trade remained the lowest – 5.3% compared to the other countries. The share of personnel costs in total purchases of goods and services was highest in Croatia – 9.3%. The share of labour costs in the retail trade increased in all countries for the period under review, while those costs decreased in retail via mail order houses or the Internet for most of the countries, which indicates a decreasing labour intensity (see Figure 8 and Figure 9).

Figure 8. Share of personnel costs in total purchases of goods and services in retail (%)

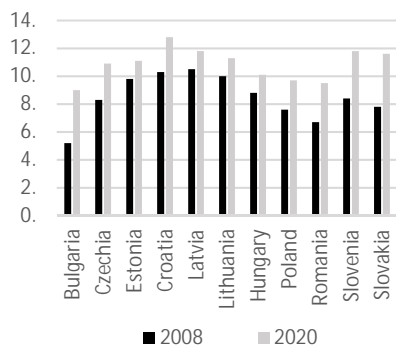
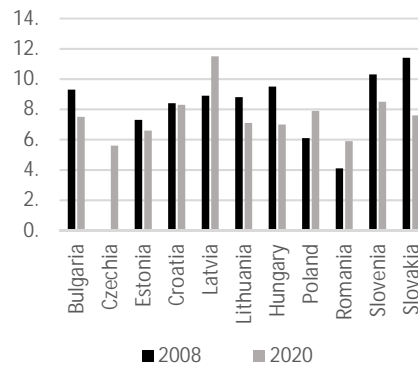


Figure 9. Share of personnel costs in total purchases of goods and services in retail via mail order or the Internet (%)



Source: Eurostat and author's calculations and presentation.

The difference between the countries regarding the indicator personnel costs per employee was significant, and again the Bulgarian trade industry had the lowest values within the entire studied period. The convergence trend was positive, as the outpace ratio for this indicator was decreasing. Again, as with the previous indicator, the growth of personnel costs per employee in the retail and wholesale trade in Bulgaria was the highest – 2.5 times. This allows Bulgaria to gradually catch up with the countries in the sample.

The percentage change of gross wages and salaries in the wholesale and retail trade in Bulgaria compared to the same period in the previous year was significantly above the average for the countries in the sample and remained positive compared to the EU-27 average -2.4%. The current economic crisis opened a debate in many countries about the level of wages. Many large retailers that employ hourly workers have announced significant percentage increases in the minimum hourly wage. It should be pointed out that the increase in labour wages in retail chains carries the danger of closing small retailers. Large retailers have opportunities to invest in reworking the retail shop format and the management of operations in them, improving the technological schemes for supplying the goods, retail sales and deliveries to customers. Innovations help them optimize costs, including, by the outsourcing of certain operations, for example, merchandising, and help them absorb the increase in the relative share of personnel costs.

Third, digitization is paving the way for a smaller number of personnel in wholesale and retail with enhanced functions, digital marketing and data analytics specialists, influencer roles and even fashion stylists. The workforce will need to master new technologies, necessitating the development of a retail and wholesale skills framework to upskill the workforce. One of the future new staff qualifications is in the field of omnichannel communication. By using platforms to enhance connectivity, trade workers can exchange information, share ideas and get instant updates. For example, the US National Retail Federation Foundation (NRF, 2021) was established in 2020 and is currently expanding a virtual mentoring program to support small businesses. Using on-air, digital and social platforms, it enables business owners to access the expertise of specialists.

The debate about self-service in retail outlets is growing (Adam, 2022). There are two opposing points of view. On the one hand, is automation due to the demographic crisis and the saving of personnel costs, and on the other hand is the concept of "just people taking care of people" due to better service and a growing share of the elderly population, for whom social contacts in retail are important. Because shopping is as important as the products themselves, regardless of the digitization processes the power of human relationships continues to drive people to retail. Traditional means of marketing communication are transformed into selling points by integrating content marketing and retail sales. A new type of business model is being created, the so-called content-driven commerce. Consumers expect the brands they patronize to deliver not only the products, goods and services they need, but also information and entertainment with them (CM Group, 2022).

Fourth, institutional economists point out that part of the reason for the labour productivity gap lies in the main sources of productivity growth – specific economic practices in individual countries and the effectiveness of institutions. As example of the latter is the various policies implemented in the field of regulation of wholesale and retail trade in the conditions of the Covid-19 pandemic (see Table 2). The packages of measures undertaken by the governments are similar in their economic content. They aim to support the trade sector, protect employment and also affect the convergence of the levels of labour productivity in the sample countries. In the last two years, there has been a decrease in the labour productivity gap in distributive trade in the sample country evident from the results in the previous part.

The behaviour of consumers is changing in the conditions of a pandemic and economic crisis, which are looking for fast delivery, competitive price and safety, incl. contactless service. The big winner is e-commerce, which will continue to be a driver of the economic development of the retail and wholesale sectors. There is also a renewed interest in local shops around the world. The growth of morbidity and the measures adopted in different countries to limit the Covid-19 pandemic led to the closure of large trade establishments and shopping centres, the introduction of requirements for certificates, and increased home-work. This limited travel for work and leisure, and thus limited visits to stores located along the way users travelled from their place of residence to their places of work and leisure. The share of in-home meals is growing, which trade experts believe will continue, resulting in growth in e-retail sales of groceries, which before the pandemic had a small share of total sales.

Table 2. Covid-19 economic and employment measures

Country	Economic-related measures	Employment-related measures
Bulgaria	<ul style="list-style-type: none"> • loan relief program based on Moratoria on bank loan payments; • loan guarantees and interest-free loans; • utilization of EU grants; 	<ul style="list-style-type: none"> • part-time without consent of the employees; • paid leave without the consent of the employees; • payroll and social security subsidies; • tax and fine enforcement relief;
Croatia	<ul style="list-style-type: none"> • loan relief program; • loan guarantees; • low interest loans, especially for SME's; 	<ul style="list-style-type: none"> • payroll subsidies; • job preservation subsidies for certain sectors (hospitality, F&B, culture, sport, recreation, etc.);
Czech Republic	<ul style="list-style-type: none"> • loan guarantee program; • lease subsidies; • tax enforcement relief; 	<ul style="list-style-type: none"> • payroll subsidies; • compensation bonus for the self-employed and SMEs;
Estonia	<ul style="list-style-type: none"> • loan guarantees for existing and new working capital loans; • local governments' subsidies, including for road maintenance; 	<ul style="list-style-type: none"> • persons registered as unemployed are allowed to accept temporary work (not exceeding 8 calendar days per month) without any influence to their unemployment status and compensations;
Hungary	<ul style="list-style-type: none"> • loan relief program and cap of the annual percentage rate (APR); • VAT and duty suspension for some products; • tax relief program; 	<ul style="list-style-type: none"> • payroll subsidies for certain sectors (hospitality, F&B);
Latvia	<ul style="list-style-type: none"> • loan relief programs, including interest cuts; • loan guarantees; • tax relief program; 	<ul style="list-style-type: none"> • subsidizing sick leaves; • payroll subsidies, including reduced hours;
Lithuania	<ul style="list-style-type: none"> • program for maintaining business liquidity and speeding up investment; • relocating EU funds to health, employment and business; • loan guarantee program; 	<ul style="list-style-type: none"> • payroll subsidies, including for reduces hours; • universal basic income (UBI) for self-employed who have previously contributed to the social security system;
Poland	<ul style="list-style-type: none"> • price control tools imposing price and margin ceilings; • simplifying procedure for the extensions and/or cancellations of lease agreements; rent freeze; rent subsidies; • loan relief programs, including interest subsidies and credit holidays; 	<ul style="list-style-type: none"> • payroll subsidies; • exemption for social security contributions for owners of SME's, social cooperatives and sole proprietorship; • limiting severance pay; • waiving the obligation to follow collective work agreements;
Romania	<ul style="list-style-type: none"> • rent subsidies; • raising the ceiling for credit guarantees for SMEs; 	<ul style="list-style-type: none"> • payroll subsidies; • subsidies for working from home employees to purchase necessary technological equipment;
Slovakia	<ul style="list-style-type: none"> • mortgage payment relief program; • loan guarantees; • loan relief program; • short-term interest-free loans for SME's; 	<ul style="list-style-type: none"> • payroll subsidies; • direct subsidies to self-employed; • subsidies for individuals who do not receive any income; • exemption from social and health payments and income taxes;
Slovenia	<ul style="list-style-type: none"> • loan subsidies; • tax enforcement relief; 	<ul style="list-style-type: none"> • payroll subsidies; • partial exemption from social security, pension and disability contributions; • universal basic income (UBI) for some legitimates (certain self-employed workers);

Source: KPMG (2020) reports per countries and author's summary.

Merchants are moving to combine a variety of services that customers want, from issuing a credit or debit card to having groceries delivered to their doorstep. Retail companies are looking for means to diversify the traditional retail service, which requires hiring personnel with the relevant qualifications.

One of the directions for future development of retail marketing is the personalization of utility for the customer. Sailthru and Liveclicker (SAILTHRU, 2021) develop and implement the Retail Personalization Index. The survey on consumers shopping preferences, priorities and behaviours finds that consumers want a personalized shopping experience that matches their newfound focus on health, home and values. This will serve to build effective strategies for interacting with customers. Seeking to provide better customer service, some retail chain asks staff in their retail stores to also engage with customers in online chats (Harring, 2022). Building omnichannel retailing requires a different omnichannel and cross-functional competence from retail and wholesale workers.

6. Conclusion

Regardless of the digital changes and the resulting concept of eliminating middlemen (distribution services, performance by manufactures and companies specializing in the provision of information services, redirects gross value added to other sectors of the economy), the study showed preservation of the importance of the distributive trade sector. There were increasing levels of gross margin as a percentage of turnover (the price of retail and wholesale services) and labour productivity in the sampled countries. Regardless of the differences in the economic standard and the size of the domestic demand, labour productivity showed comparable trends during the studied period. Labour productivity measured by turnover and gross margin per employee in the retail and wholesale industry declined during periods of crisis and slowly increased during periods of recovery.

The labour productivity is the lowest in the Bulgarian trade industry during the studied period, but there is a positive trend to reduce the gap between the Bulgarian distributive trade and those of the other countries. The paper explored key factors determining the productivity gap – concentration of the trade industry, digitalization, labour intensity, investment and economic policies to protect the business. The level of labour productivity was higher in the countries with a higher concentration of trade. The concentration was the lowest in retail trade in Bulgaria, however, its growth rate was much larger than the average.

Comparing base growth rates through the outpaced ratio between rates in the mail, telephone, or Internet retailing and total retailing is indicative of the acceptance of e-commerce as a source of growth in the retail sector in Bulgaria. The indicator shows continuous growth over the years of the period. The digitization of commercial processes involves a labour force with a higher level of qualification, and employers should invest in retaining personnel in periods of crisis. There is a restructuring of the workforce and its direction towards the digitalizing sectors, with the goal of expanding the market share of e-business.

The ratio between personnel costs and total purchases of goods and services in retail trade increased in the sampled countries, but decreased in e-retailing in most of the countries,

which showed a trend of decreasing labour intensity. This ratio in Bulgaria remained the lowest at the end of the period compared to the other countries, however, the growth was the largest.

Based on the previous analysis the increase in the level of concentration in the retail trade and the share of e-commerce as well as the relative share of labour costs are a prerequisite for reducing the differences in labour productivity. Yet, the outpace ratio between investment per person employed in the trade sector in Bulgaria compared to other countries is growing, which will affect the preservation of the labour productivity gap in the future.

The reduction of the labour productivity gap contributes to the reduction of the income gap, as well as to the attraction and retention of capital, financial, physical and human, qualified personnel. Understanding the causes of the productivity gap is essential to effectively guide economic policies. The results of the analysis highlighted the main directions for policies to support investments in the trade sector – digitalization and labour force, which correspond with the basic recommendations proposed in a recent report of EuroCommerce on the development of the distribution trade in the EU until 2030 as largest private sector employer (EuroCommerce, 2022). The wholesale and retail sectors need support to transform digitally, implement new technologies and develop omnichannel operations in stores, warehouses, logistics, customer communications and interactions. The trade sector requires investment in employee training and development, up- and reskilling the labour force, to attract and retain skilled personnel. The institutions should create policies to sustain the effective operation of the SMEs, which are part of the local communities, especially in Bulgaria, and have lower labour productivity.

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