
OPPORTUNITIES AND CHALLENGES REGARDING ENTERPRISE PARTICIPATION IN GLOBAL VALUE CHAINS FOR THE DEVELOPMENT OF BULGARIAN REGIONS

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Abstract. Under the influence of globalisation and technological innovation, the focus of economic development at a national and regional level is on increasing competitiveness. According to studies by the Organisation for Economic Co-operation and Development (OECD), global value chains (GVCs) create significant economic opportunities for companies and for the regions in which they operate. The paper presents the results of a Delphi survey on the views of experts on the opportunities, risks, and challenges of enterprise participation in GVCs for regional development. The presented results are based on analyses from Project „Development and implementation of a model for assessing the innovation potential of global value chains as a basis for increasing regional competitiveness” financed by the National Science Fund, contract No KII-06-H55/8 from 16.11.2021.

Keywords: global value chains; regional development; Delphi method; risk and opportunities

JEL: O10; O30; F60

1. Introduction

In the broadest sense, global value chains are defined as a systematic process encompassing the activities of production, exchange, distribution, and after-sales service of a product or service, some of which are carried out in different countries (Gereffi and Fernandez-Stark, 2016; Abonyi, 2006, p. 4). GVCs are cross-border networks for the production and marketing of a product or service where value-adding tasks along the chain arise before or after production (e.g. at the product design or marketing stage) (Global Value Chain Development Report 2021). The literature supports the view of a positive relationship between the participation of enterprises in GVCs and the increase in the number of employed persons (Pahl and Timmer 2020), thereby having a positive impact on labour productivity (Constantinescu et al., 2019). GVCs have a positive effect on the innovativeness of enterprises and on their entry in global markets, while leading to the transformation of entire industries and

regions (Staritz, 2012; Dallas, 2014). In this regard, global value chains provide substantial economic benefits both to the companies involved and to national and regional economies (OECD, 2013). Rapid globalisation of value chains increases economic productivity and stimulates the participation of low-income countries with weak industrial growth rates in international trade (World Bank, 2017). Participation in GVCs helps international companies to attract suppliers and partners in countries and regions with emerging economies. This helps reduce the cost of production and the cost of selling products in countries with more developed economies. Some industries (automotive, ICT, etc.) are highly dependent not only on foreign raw materials but also on geographically highly concentrated suppliers (OECD, 2023). According to Ambroziak (2018), countries with less participation in GVCs (such as Bulgaria, Estonia, Latvia, Lithuania, Poland, and Romania) are more sustainable in services.

The literature upholds the view that GVCs are not a global phenomenon, but have a mainly regional manifestation (Hao Xiao, et al, 2020, p. 560). This is due to:

- the strong "sensitivity" of complex global trade networks to external shocks (Li et al., 2019);
- the reduction in operating costs resulting from the regionalisation of the chains;
- the optimisation of production and the reduction of the time of production process phases limit the positive effects of firms' participation in international chains. Such optimisation is mainly the result of digitalisation, automation, the development of new technologies, and innovation. For example, the use of substitutes for the main raw materials (e.g. made from 3D printers) reduces the need to use foreign suppliers (Rehnberg and Ponte, 2018);
- limiting the negative effects on the economy from extraordinary events and shocks (such as pandemics, wars, etc.) is controlled more effectively and faster at the regional level than at the global level.

Issues regarding global value chains and the impact of innovation on regions and the economy have also been subject to analysis in the Bulgarian scientific diaspora (Keremidchiev and Rukova, 2012; Hristova-Balkanska, 2021, 2022; Marinov and Spasova, 2021; Panushev, 2020; Molov, 2017; Tasev and Nestorov, 2017; Georgiev et al., 2020; Branzova and Dimitrova, 2023; Dimitrova, 2022; Georgieva and Yalumov, 2021). However, the focus of the studies is primarily on the impact of GVCs on economic and business growth, interactions between participants, the benefits, threats, and positioning in the chains, the transfer of knowledge and technology, the innovation potential of enterprises in the chains, the impact of exports on economic growth. Less prominent are the issues and concerns about the impact of GVCs on the

development of the regions in which the enterprises involved in such chains are located.

The **main objective** of the present study is to derive the benefits, threats, and impact of the participation of enterprises in GVCs for the development of regional economies. Global value chains are the subject of the study. The positive and negative impacts on the development of the regions as a result of the participation of enterprises in GVCs are the **object of the analysis**. The **research methods** and approaches used are based on the logical, inductive, deductive, and comparative methods, as well as on the methods of analysis and synthesis. For the empirical study, the Delphi method was used. The **main research hypothesis** is that global value chains have a positive impact on the innovation potential and competitiveness of regional economies. However, there are substantial risks of chain shocks and monopolisation, which may have a negative impact on the regional economy in the long run.

2. Methodology and results of the study

2.1. Methodology of the study

The study was conducted in three stages in the period April 2023 – August 2023 using the software product Unipark. To this end, a questionnaire with three main sections and a total of 15 questions was prepared. The questions in the first section focus on the experts' views on the nature of GVCs and the impact of enterprises' participation in such chains on the economic development of the regions. The second section contains questions on the assessment of the capacity of firms in global value chains to develop innovative potential and to achieve economic growth conditional on or influenced by their participation in GVCs. The third section of questions has a legal focus and relates to European and national policies: their role, implementation, and effectiveness on global value chains.

The questionnaire was tested in a pilot study. To achieve full anonymity and relevance of the results obtained, the experts participating in the pilot study are not part of the participants in the three stages of the Delphi survey. The questionnaire is completely anonymous and to ensure that it is completed in three stages by the same experts, an appropriate data coding has been developed and implemented to ensure that the person completing it is not personally identified. The invited participants are experts from the academic community, and the public and business sectors, analysing the issues of GVCs or working in companies involved in such chains. Of those invited in the first stage of the survey, twenty-three experts took part (response rate of 46%), while 18 experts took part in the remaining two stages. Based on the main research objective, the object of analysis in this report is the answers to the questions in the first section of the questionnaire. Following the methodology of the Delphi study, in the first phase, participants provided written expert

opinions on open-ended questions. During the second and third stages, they had to identify and review the views and opinions from the previous stage which they considered to be most relevant and correct. A threshold of agreement was set when 75% or more of the experts responded that they fully agreed or rather agreed with a statement. For questions where more than 5 statements were agreed upon in the second stage, participants ranked them by choosing the ones they considered most important. Thus, the standard methodology for conducting the Delphi survey was adapted to the study's objectives. A major limitation of the study is that it focuses on the overall regional development of the participation in GVCs, without taking into account the specific features of the regions in Bulgaria and the local economic, geographical, social, and other advantages.

2.2. Results of the Delphi survey

In the first stage of the Delphi survey, the areas of influence of global chains on the economic development of the regions, as well as the benefits and negative effects of participation in such chains were examined. The priority areas identified by the experts, in which GVCs have a positive impact on regional development are:

- Increasing the total volume of products and services.
- Improving labour productivity.
- Increasing employment by creating more and new jobs.
- Improving the quality of life and the standard of living.
- Improving living conditions through a positive impact on the environment.
- Increasing the innovation potential of the businesses.
- Increasing the innovation potential of the regional economy.
- Improving regional policies and programmes.
- Transfer of technology and knowledge to the region.
- Improving regional competitiveness.

In the second stage, the experts reached an agreement on the areas in which GVCs have an impact on regional development. A consensus of 75% or more was recorded for the claims that GVCs have a positive impact mainly on the innovation potential of the regional economy and its competitiveness. As a result, the question was dropped for the third stage.

Development at the company level of the enterprises involved in the chain has an impact on the development of the regions in which these enterprises operate. Such a link can be considered to exist in both direct and inverse relationships. Improving the competitiveness of production systems located in economically weak or disadvantaged regions is linked to the degree

of innovation of enterprises in the region (Mikova, 2016, p. 57). In this context, the impact on the innovation of enterprises resulting from their participation in GVCs is also analysed. In terms of the positive impact of GVCs on the development of enterprises involved in such chains and, consequently, on the economic development of the regions in which they are located, the following expert opinions were gathered during the first stage regarding GVCs:

- Stimulate the development of the innovative potential of companies through the need to address non-traditional problems in the process of interaction with foreign partners.
- Provide access to good practices, innovation, experience, and know-how that is beneficial to both enterprises and the region.
- Foster the drive to provide competitive products/services, which has a positive impact on regional competitiveness.
- Encourage the updating of internal policies and compliance with additional standards to improve value-added along the chain.
- Open up new horizons and new partnerships at the company and regional level.
- Lead to the development and upskilling of staff.
- Enable technology import/transfer, innovation exchange, technology sharing, knowledge exchange, and dissemination of established practices.
- Promote research and development activities, building innovation capacity and development of innovative regional culture.
- Promote the business policy of companies in the management of innovations and in finding product and market niches.
- Provide access to customers at various stages of new product development.
- Enable companies to enter new markets.
- Enable companies to implement new and/or more efficient technological processes, as well as infrastructure improvements.
- Increase financial resources (owned and attracted) and improve the quality of human capital.

During the second stage of the Delphi survey, the experts unanimously agreed on all the statements received during the first stage. To reduce and identify the most positive aspects within the third stage, the experts chose the five most important aspects in their opinion. From the data collected and analysed, those involved in the survey agreed on the view that GVCs provide businesses with access to good practices and innovation, as well as opportunities to learn and acquire know-how. In addition, they supported the argument that participation in GVCs stimulates the development of the innovation potential of companies based on the need to resolve non-traditional

problems in the process of interaction with foreign partners. According to one-third of the experts, GVCs have an impact on the innovation potential of enterprises through:

- Encouraging the provision of competitive products/services to end customers.
- Opening up new horizons for entry to new markets and new partnerships.
- Enabling the import/transfer of new technologies, the exchange of innovations, the exchange of knowledge, and the dissemination of established practices.

Gereffi (2013, p. 10) argues that export-oriented industrialisation does not ensure successful economic and regional development. According to Singer (1950), in comparative terms, the productive sectors integrated in GVCs are not a real part of the local economy and the positive effects of the participation of enterprises in global value chains are very small. Dünhaupt et al. (2022, p. 89) are of the opinion that the effects of GVCs may be too weak to have a positive macroeconomic and regional impact. If GVCs are not part of local production, this may lead to the development of economic regions that are more closely linked to foreign markets rather than to the regional economy (Dünhaupt et al., 2022, p. 90). Considering these opinions, subject to analysis are the expert opinions of the persons participating in the Delphi survey regarding the potential negative effects that GVCs may have on the development of the regions. The summarised opinions of the experts are:

- Larger companies in GVCs may gain a dominant position and manipulate the participation of smaller enterprises.
- Participation in GVCs may increase inflation.
- Participation in GVCs may lead to price pressure from larger actors in the chain, which could be the reason for the destruction of local entrepreneurial businesses due to the importation of products of lower quality and at much lower prices.
- Reduction of regional production, regional development activity, and the workforce in the relevant field.
- Predatory use of resources and environmental pollution in the region.
- GVCs are not suitable for regions lacking minimal autonomy along the production-distribution-sale-consumption chain.
- Mechanical transfer by medium and small enterprises of inappropriate practices of large companies, which can have a negative effect on the economic development of the region.
- Wars and political crises have direct effects on the activity of enterprises and, hence, on the region. The shock of these crises cannot be

resolved at the regional level, because it comes along the chain from abroad.

- Potential violations of workers' rights, and hence a decline in living standards and insolvency.
- Insufficiently trained workforce or workforce without language skills.

For five main expert opinions from the first stage of the Delphi survey, an agreement was reached in the second stage (see Table 1). Therefore, the issue was dropped during the organisation and conduct of the last stage.

Table 1. Level of agreement on the circumstances under which participation in global value chains may negatively impact regional development

Opinions of experts from the previous stage	Strongly agree	Rather agree	Neither agree, nor disagree	Rather disagree	Totally disagree	Level of agreement
The more active/larger participants in GVCs can gain a dominant position and manipulate the participation of less active / smaller participants.	72%	28%	0%	0%	0%	100%
Price pressure from larger players in the chain can lead to destruction of local entrepreneurial businesses due to importation of products of	61%	39%	0%	0%	0%	100%

lower quality and at much lower prices.						
Reduction of regional production, regional development activity and the workforce in the relevant field.	39%	50%	6%	6%	0%	89%
Predatory use of resources and environmental pollution.	56%	22%	17%	6%	0%	78%
Wars and political crises.	56%	22%	6%	11%	6%	78%

Source: own analysis based on the data from the three stages of the Delphi survey

Regarding the circumstances in which participation in global value chains can negatively affect the development of the regions, the danger of larger enterprises acquiring dominant positions over smaller national ones is outlined by almost all experts. Price pressure along the chain was cited by two-thirds of the experts. Wars, political crises, and predatory use of resources were noted as major obstacles to regional development by less than a third of the experts.

2.3. Discussion

In the literature, the majority of authors supporting the positive effects for enterprises participating in GVCs are grouped around the benefits of optimising production processes, reducing production and sales costs, transferring new technology and know-how, building new networks and

partnerships, entering new markets, increasing the value added of end products and services, and improving innovation capacity. In terms of the positive effects on the regions in which the enterprises operate, the benefits are expected to raise living standards and employment, increase labour productivity, innovation capacity, economic growth, attract foreign investment, and transfer of knowledge and technology to the region. The majority of these benefits were also recognized by the experts involved in the Delphi survey. The most significant positive impact of GVCs on regional development, according to the participants, is related to the innovation potential of the regional economy and its competitiveness. Regional economic development occurs when the participants in GVCs increase the value-added created by them (Sako and Zylberberg, 2019, p. 289). Innovation is essentially a factor in increasing the value added of enterprises and creating competitive advantages. In this regard, it is not surprising that, according to the results of the Delphi survey, the benefits for enterprises participating in GVCs are related to access to innovation and good practices, borrowing foreign experience, and obtaining know-how. These results support the authors' research that increasing the benefits of participating in GVCs can be realized through the diffusion of knowledge and technology from external investors, along with increasing the capacity of local firms to absorb new knowledge (Taglioni and Winkler, 2016). In the literature, it is argued that if a significant part of production takes place in foreign countries, the transfer of knowledge and know-how may be hampered by geographical, cultural, and institutional differences (Lane and Lubatkin, 1998). However, this risk was not taken into account by the participants in the survey. At the same time, experts believe that participation in GVCs encourages the development of firms' innovation potential by solving non-traditional problems in the process of communication with foreign partners.

Some regional economies and sectors in the chain may be more exposed to supply and demand disruptions than others. This is typical of small open economies which rely mainly on imports of goods and raw materials and export most of their production to external markets. At the micro level, risks related to the lack of transparency of the relationships of actors along the chain, geopolitical uncertainty, lack of qualified personnel, financial risks, logistics problems, and reluctance to share knowledge by multinational companies are among the most frequently analysed in the literature. As a result, enterprises participating in GVCs may be in economic dependence on those further up the chain. The results of the present study show that the participating experts agree on two main risks for enterprises in GVCs. First, larger companies may gain a dominant position and manipulate the participation of smaller companies. Second, larger players in the chain can exert price pressures that may destroy local entrepreneurial businesses by importing products of lower quality and at

much lower prices. It is noteworthy that the risks mentioned focus on the negative effects for the enterprises, rather than on the regions in which they operate. Access to different regional expertise helps to overcome the constraints of local resource providers and, in the long run, it helps combine or create new knowledge in the form of innovation and enhance the economic growth of the region (Cano-Kollmann et al., 2016). Nevertheless, the experts give priority to the effects at a company level, which limits the possibility of a more in-depth analysis of the risks for the regional economy. The reasons for this can be found in the strong defragmentation of the innovation potential of the regions in Bulgaria and the priority development of enterprises in the services sector.

3. Conclusion

The competitiveness of regions is often linked to their capacity to generate innovation. The innovation capacity of enterprises is interdependent with the innovation ecosystem established in the region in which they operate. Through participation in GVCs, an increase in productivity and a reduction in production costs are achieved. This creates opportunities for economic and innovation progress for smaller firms from countries with underdeveloped or developing economies. In the context of the current social, economic, and geopolitical reality, a major challenge for the development of GVCs is the creation of a new concept for achieving business and regional economic efficiency. Therefore, GVCs should not be analysed in isolation, only as a tool for improving individual company competitiveness.

As a matter of priority, the experts involved in the Delphi survey consider that participation in GVCs improves regional competitiveness and innovation potential. They were unanimous on the possibility for Bulgarian enterprises in the chains to gain access to good practices and innovation, to learn from experience, and to acquire know-how. Despite the reported positive effects, previous author studies in the field reveal the reluctance of Bulgarian enterprises to participate in GVCs (Georgieva, 2023; Georgieva et al., 2022). The main risks of such chains, reported by the experts in the study, are the danger of large multinationals gaining dominant positions over smaller national ones and the existence of price pressure from large companies along the chain. Although these results support the literature in the field, they do not consider thoroughly the regional specificities and the impact of GVCs on the regional economy and innovativeness. Emphasis is also placed on the role of vertical links between firms in the chain, without considering horizontal links. Due to the limitations of the present study, more research is needed on the impact of GVCs on specific regions.

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