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**The role of state governance in GVCs - the example of
the globalization of the Czech automotive industry after
the 1990s**

Master's thesis

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Declaration

1. I hereby declare that I have compiled this thesis using the listed literature and resources only.
2. I hereby declare that my thesis has not been used to gain any other academic title.
3. I fully agree to my work being used for study and scientific purposes.

In Prague on 01.08.2023

Yu Tian

References

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Abstract

The dynamics of governance is one of the most active topics of debate in the GVC and global production network debate, yet attention on the subject of governance has been largely focused on TNCs, with less attention paid to the state and public governance aspects. In recent studies, the role of the state in GVC governance has received more attention, and following in-depth analyses some scholars have proposed three key governance functions: facilitative, regulatory and distributive. Against this background, this paper will analyze the history of the Czech automotive industry in the development of GVCs after 1990 and the role of the state in the automotive industry's participation in GVCs based on the theory of the three roles of the state in GVC governance: facilitator, regulator and distributor.

Keywords

National governance; global value chains; global production networks; Czech cars; political economy; privatisation

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Introduction

Since the 1990s, the rise of global value chains (GVCs) has fuelled the rapid expansion of international trade. The increase in international production, and in particular the decentralisation of production organisation, has contributed to the rapid expansion of world trade. By tapping into the comparative advantages of various locations, global value chains (GVCs) enable strong linkages between dispersed economic activities across multiple geographic regions. Theories of GVCs and global production networks focus on the changing division of industrial labour and resource allocation in the global economy, emphasizing the interaction between countries and multiple actors such as multinational corporations, local governments, and civil society organisations. International, inter-firm flows of technology, knowledge along the production stages and the integration of lead firms and suppliers of key components in multiple overseas locations are the main features of global value chains. (The World Bank, "GVCs.")

Global Production Networks (GPNs) are an extension and expansion of the study of global value chains, placing greater emphasis on the complexity, dynamism, and geographic, social, and institutional linkages in production networks (Coe, "Global," 271- 295. and Vlčková, "Visegrad , "427–48.) The concept of global value chains considers value creation as fundamental to economic growth. Generally, the activities at the beginning and end of the value chain are the ones with the highest value. The activities at the beginning and end of the value chain are those with the highest value The activities at the beginning and end of the value chain are those with the highest value added (e.g. design, R&D, marketing). Their share of value added increases over time. With the increasing globalisation of production and the development of neoliberal markets, the concepts of Global Value Chain (GVC) and Global Production Network (GPN) have become important tools for analysing the global economic landscape, industrial development and national governance. Since the concepts of public governance highlighted in this paper overlap in the analytical frameworks of GPN and GVC, this paper will focus on both concepts. (Vlčková, "Visegrad, "427–48.)

The study of governance relationships is by far the dimension that has received the most theoretical and empirical attention in studies of GVCs. Sarah E. McWilliam et al. give the definition of GVC governance as "the organisation and control of GVCs". The theoretical

development of governance in GVCs can be traced back to the "buyer-driven" theory proposed by Gereffi in 1994. According to this theory, the dominant firms (buyers) in GVCs drive global production and trade by controlling the supply chain. As globalisation has intensified, more and more research has focused on inter-firm relations and corporate governance, as well as on related economic development outcomes. Although the importance of institutions and the state has been occasionally mentioned, in general, most of the early analyses of governance in GVCs have been limited to a focus on transnational corporations (TNCs), with very little attention paid to the state. In the early literature on the governance of GVCs, which mainly centred its analysis on multinational corporations (MNCs), the definition of GVC governance tended to refer to the relative power and coordination relationships between participating firms (Gereffi, "International," 1999. and Gereffi, "Global," 2014.). The role of the state in these debates was more passive, marginalised or 'external'. However, the role of actors other than TNCs has received more attention in recent studies of GVCs and GPNs (Horner, "Beyond," 2017. and Mayer, "Outsourcing," 2017). A number of studies on GVCs and global production networks have emphasised attention to the key role of the state in GVC governance. (Horner, "Beyond," 2017., De Marchi, "State Policies," 2022 and Mayer, "Outsourcing," 2017), arguing that the State should be seen as a part of GVCs rather than as an external influence, and that the State is the main architect of the creation of GVCs rather than a bystander. Research on state governance concerns suggests that the key role of the state in the complex process of GVC governance is not limited to that of a facilitator in attracting FDI, but includes other aspects as well. For example, Mayer et al. (2017) note that the key functions of the state in GVC governance can be categorised as facilitative, regulatory and distributive. Using this analytical framework, Alford (2018) conducted an empirical study on the role of the state in GVCs for the South African fruit industry. Horner (2017) also analysed the four roles of the state in GVCs as a facilitator, regulator, buyer, and producer in his study.

Global production network (GPN) research also provides more space for analysing the role of the state in GVC governance. Coe and Yeung (2015) define governance as "the formation of institutional and regulatory arrangements for the interaction between production networks and the external environment", which implies that firms and other actors are situated within the analysed network. GPN's analytical framework thus provides a greater theoretical basis for examining the role of the state in GVC governance. While much of the discourse

addressing the governance of GVCs and GPNs still maintains a firm-centred character, research on state participation in GPNs and public governance has received increasing attention. Academics have conducted in-depth research on the role of the state in the governance of GVCs and global production networks. For example, Neilson et al. (2014) focus on the role of the state in the coffee industry GVC, while Ponte and Ewert (2009) explore state intervention in the governance of the South African wine industry GVC. These studies emphasise the proactive nature of the state and policy in engaging in GVC governance and the criticality of public governance in the context of GVCs, as well as the importance of complementarity between private and public governance. (De Marchi, "State Policies," 2022) Research on the governance of GVCs and global production networks has also revealed the important role of policymakers and international organisations in state governance. For example, international organisations such as the World Bank (WB) and the World Trade Organisation (WTO) are increasingly focusing on the state and policy imperatives in GVC governance. These organisations focus on how policymakers can balance private and public governance in GVC governance and promote economic development, innovation and sustainable development. (The World Bank, "GVCs.")

After the revolution of 1989, the Czech automotive industry was gradually integrated into the global value network through foreign investments, and the Czech automotive industry became the most successful sector of Czech participation in globalisation. The development of the Czech automotive industry has been studied by many scholars, including studies on the role of FDI in the transformation of the Czech automotive industry (Pavlínek, " A Successful," 2008), on the process of privatisation of Czech automotive companies, and on large multinational corporations in the Czech automotive industry. large multinationals in the automotive industry, etc. As the Czech automotive industry has become more globalised, more and more scholars have begun to focus on the development and upgrading of the Czech automotive industry in relation to global value chains and global production networks, and Petr Pavlínek in particular has made a great contribution to this field of research. However, in line with the trend in the development of governance theories of GVCs, most of their research has been focused on the influence of multinational corporations (MNCs), with less attention paid to the role of the state and the role of the state, but in these works it can be observed that the state governance actually plays an important role in the participation of the Czech automotive industry in GVCs, as can be observed in the summary of the recent trends

in the research on the automotive industry. The increased interest in national governance can be observed.

In summary, since the 1990s, global value chain and global production network theories have become important tools for understanding international trade, the global economic landscape, industrial development and national governance. These theories focus on the comparative advantages of various locations, the interactions between multiple agents, and the relative power and coordination between TNCs and other actors. While most studies remain firm-centred and research addressing state participation in GVCs and public governance is still very limited, a growing number of scholars have begun to focus on the key role of the state in the governance of GVCs and global production networks. These studies provide new theoretical frameworks for understanding the role of the state in the dynamics of GVC governance, as well as practical guidance for policymakers and international organisations. These perspectives on state governance in GVCs and global production networks are crucial to my research.

The aim of this essay is to discuss the relationship between state governance and the Czech automotive industry's participation in GVCs/GPNs after the 1990 economic reforms. I will build on Mayer's (2017) theoretical framework for the role of the state in participating in GVCs and analyse how the governance dynamics of the state's facilitative, regulatory and distributive governance of the Czech automotive industry in GVCs after the 1990 economic reforms played out in a particular political and economic context. Although the development of the Czech automotive industry after 1990 was driven by foreign direct investment, I argue that the role of the state in the development of the Czech automotive industry also deserves attention. Through a series of positive policies to attract foreign investment, the state attracted a large amount of foreign investment into the Czech Republic, which brought capital and advanced management experience and technology to the transformation of the Czech automotive industry and made the Czech automotive industry rapidly integrate into the global value chain, but in this process, the Czech Republic's dependence on foreign-funded enterprises has gradually increased, which to a certain extent has limited the sustainable development of the Czech automotive industry in the global value chain.

The essay has been organised in the following way. I will adopt the qualitative research method of case analysis to study the role of the state in GVC governance using the Czech automotive industry as an example. I will conduct a comprehensive analysis of state policy and public governance in secondary sources such as research on the history of the Czech automotive industry's development after the 1990s and the Czech Republic's position in GVCs and global production networks, government policies and statistical data on the development of the automotive industry, surveys and interviews from the Association of the Automotive Industry (AAI), and reports by automotive companies. The article will be divided into three main sections. In the first section I will briefly describe the development of the Czech automotive industry in the global industrial chain/global production network after 1990, in the second section I will analyse how the three roles of the state as facilitator, regulator and distributor have manifested themselves in the participation of the Czech automotive industry in GVCs, and in the last section I will discuss the results of the study and draw conclusions.

The role of the state in GVCs/global production networks

The research study on the governance dynamics of the state in the Czech automotive industry's participation in GVCs in the post-communist period will be analysed in this paper mainly using three governance roles (Mayer,2017,Honer,2017,Alford&Philips,2018). The role of facilitator refers to the state's promotion of firms' or industries' participation in GVCs through the development of a policy globalisation strategy, whereby the state facilitates firms' participation in GVCs and responds to challenges by means of tax incentives, subsidies, export processing zones (EPZs), incentives for research and development (R&D), the implementation and negotiation of favourable trade policies, and interstate lobbying. The State is not a passive responder to GVC governance, but an active participant. The role of a regulator means that the state actively restricts the activities of firms in GVCs through quality control, standards enforcement, labour supervision, etc., to ensure that firms in GVCs comply with relevant regulations and standards to protect consumers, workers and the environment. Or, in order to become "low-cost points" in GVCs, they may voluntarily forego regulation and "outsource" regulatory functions to private actors, maintaining an environment free of State regulation. Finally, there is distributive governance, whereby the "unequal" distributional patterns that are an intrinsic feature of the GVC system are not only caused by market asymmetries manipulated by dominant firms in GVCs, but are also determined by the politics of governance. As with regulatory governance, the State has been outsourcing its role in distributive governance, and the neo-liberal agenda promoted by the State has undermined policies with redistributive consequences, limiting the effectiveness of the distributive policies available to the State. Distributive outcomes are shaped by the strategies of State governance, in addition to being determined by markets in global value chains.

1. The Czech Automotive Industry in Global Value Chains and Global Production Networks

The last 30 years have been an important period in the development of the Czech automotive industry, and the geography of production has changed significantly as a result of the dramatic changes in the global automotive production network, in particular the centralised consolidation of the automotive industry and its international production, which has been organised more on a global rather than a national production network. The global automotive leading firms increasingly organised their production networks on a macro-regional scale for the purposes of keeping low costs, pursuing profitability and increasing competitiveness, and a large number of export-oriented low-cost production plants were set up close to the periphery of the core regions, which were called "integrated peripheral market"¹. So while production in developed countries shrank, car production centres and markets surged in these emerging countries.(V. et al., 2019)² Central Europe, where the Czech Republic is located, is a typical example of such an "integrated peripheral market". Until the transformation of the 1990s, the Czech Republic had been an isolated periphery of the global economy, with former Czechoslovakia having a centrally planned economy from 1948 to 1989, with an emphasis on heavy industry and close trade relations only with the other Eastern Bloc countries. This was despite the fact that Czechoslovakia was an industrial country with a long tradition of heavy industry, and automobile production was one of its most important industries. During this period, industry and the economy were in the hands of the state due to Czechoslovakia's policy of nationalisation and collectivisation. Although Czechoslovakia's automobile industry had a long history of development and was relatively advanced in terms of technology and design compared to other countries in Central and Eastern Europe, under this state-controlled economic system, automobile production had been controlled by the state plan, and lacked flexibility and efficiency in market competition, which led to low productivity and lagging product quality and design.³ In the early 1990s,

¹ Pavlínek, Petr. 2017. "Foreign Direct Investment and the Development of the Automotive Industry." In *Dependent Growth: Foreign Direct Investment and the Development of the Automotive Industry*, 1-46. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-319-53955-3_1.

² Covarrubias V., Alex, and Sigfrido M Ramírez Perez. 2020. "Introduction: Changing Geographies and Frontiers of the Automotive Industry." In *Introduction: Changing Geographies and Frontiers of the Automotive Industry*, 1-38. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-030-18881-8_1.

³ Pavlínek, Petr. 2008. "Central and East European Automobile Industry." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 1-32. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

with economic reforms and privatisation, Czechoslovakia's manufacturing industry gradually moved towards marketisation and repositioned its trade towards Western Europe. But with the onset of social and economic change, the automotive industry in the former Czechoslovakia struggled for a time. The disintegration of nominal relations within the Council for Mutual Economic Assistance (COMECON) led to the loss of the Czech Eastern European market, while at the same time their products were uncompetitive in the Western market after a long period of planning, and with the high inflation brought about by shock therapy and the large influx of second-hand cars from abroad, the automotive firms' domestic market also suffered a great deal, with more and more firms closing down or reorganising in the face of rapid economic change and intensified competition have closed or reorganised. But the rapid socio-economic changes also brought opportunities for the recovery and development of the Czech automotive industry after a long period of planned economy.

With privatisation and the establishment of the liberal market after 1990, a significant amount of foreign investment and transnational automotive companies (TNCs) entered the Czech Republic. Foreign direct investment (FDI) and transnational corporations (TNCs) played an important role in the transformation of the Czech automotive industry and its participation in global value chains after 1990. The participation of multinational automotive companies not only brought capital to the transformation of the Czech automotive industry but also brought positive horizontal spillover effects, brought more effective management methods and technologies to the Czech automotive industry, and helped Czech automotive enterprises to complete the transformation into the global market more quickly, accelerating the participation of the Czech automotive industry in the global value chain.⁴ The most representative of these was the acquisition of Škoda Auto by Volkswagen of Germany in 1991. The acquisition and restructuring of Škoda by the Volkswagen (VW) company played a key role in the restructuring and development of the automotive industry in the post-communist Czech Republic, as well as in the reintegration and upgrading of the Czech automotive industry in the global value chain and the global production network after 1990. The joint venture agreement between the Czech government and Volkswagen of Germany in 1989 brought a significant amount of capital to Škoda, which not only helped the company

⁴Pavlínek, Petr, and Pavla Žižalová. 'Linkages and Spillovers in Global Production Networks: Firm-Level Analysis of the Czech Automotive Industry'. *Journal of Economic Geography* 16, no. 2 (March 2016): 331–63. <https://doi.org/10.1093/jeg/lbu041>.

to survive the transformation crisis, but also helped Škoda to complete its transformation and upgrading so that it was able to be competitive in the Western European market. Škoda Auto became one of the most successful companies in the Czech post-communist reforms, retaining not only the Škoda brand, but also the R&D function and developing many new models. The rapid growth of Škoda has resulted in a large number of jobs and currently employs 35,000 people in the Boleslav region, which has consistently had the lowest unemployment rate in the Czech Republic. Škoda has also established a university for personnel training, contributing to the upgrading of talent in the Czech automotive industry and to the future development and international competitiveness of Škoda.⁵ In addition to this, the joint venture agreement between the Czech government and Volkswagen provided for the protection of Škoda's Czech component suppliers, allowing them to remain undisplaced for a period of time after the establishment of the joint venture and helping them to adapt to Škoda's needs. The acquisition of Škoda created strong upgrading pressure on its Czech suppliers in the early 1990s, which led to rapid restructuring and upgrading of Czech suppliers, greatly improving their competitiveness in the global market and contributing to the overall changes in the Czech automotive components industry. Today, Škoda plays an important role in the development of the Czech economy, not only in the Boleslav region but also in the Czech Republic as a whole. With production sites not only in the Czech Republic but also in China, Slovakia, India, Ukraine and Russia, Škoda plays an important role in the participation and upgrading of the Czech automotive industry in the global value chain.⁶ Two important multinational companies that entered the Czech Republic after Volkswagen were Toyota Motor Corporation from Japan and Hyundai Motor Company from South Korea. 2005 saw the beginning of a significant rise in motor vehicle production in the Czech Republic, thanks to the start of production at the Czech Manufacturing Plant of TMMCZ - Toyota Motor Corporation (to be known as TPCA - Toyota Peugeot Citroën Automobile Corporation until 2020). This was followed in 2008 by the start of large-scale production by Hyundai Motor Manufacturing Czech Republic (HMMC) in the Nošovice

⁵ŠKODA AUTO A.S. “Annual reports 2022”. 2023. Accessed July 28, 2023. https://cdn.Škoda-storyboard.com/2023/03/Škoda_Auto-Annual_Report-2022-EN_128a4978.pdf?_gl=1*1tk3t8*GA4_ga*YTJiY2NhMmEtOTA0Zi00NDM3LThiMmMtMTI3ZWQyNTUyYTg2*GA4_ga_CR52PEW89M*MTY4OTgwNTIwMS4yLjEuMTY4OTgwNTIxMS4wLjAuMA.

⁶ Pavlínek, Petr. 2008. ” Post-1989 Transformation of Škoda Auto. “In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 79-124. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

industrial zone, which further contributed to the diversification of the Czech automotive industry. With the expansion of production at Škoda Auto's Czech plants in Mladá Boleslav and Kvacín. From 2005 to 2019, Czech automotive production more than doubled.⁷

According to Jana Vlčková's 2018 study⁸ on the extent of V4's participation in GPNs, the embeddedness of foreign manufacturing companies in the Czech automotive industry has been deepening since the turn of the century, and the Czech Republic belongs to the group of countries with one of the highest levels of participation in global production networks, with multinationals generating a significant role in the Czech economy. At the beginning of the transformation of the automotive industry, the Czech automotive industry was mainly dependent on regional value chains dominated by Germany, but in recent years this dependence is being transformed into a link to global value chains with the entry of several multinational companies. (Only 29 per cent of the Czech automotive industry's exports in 2021 go to the German market (AutoSAP 2021)⁹) Integration into the GPN has boosted production and employment in the Czech automotive industry. Since the beginning of the century, through massive investments by large foreign automotive multinationals, the Czech Republic has managed to become one of the world's great automotive countries with the second-largest production of passenger cars per 1,000 inhabitants. From 1989 to 2022, the Czech Republic's total car production increased almost sixfold, from 191,233¹⁰ to 1,224,456¹¹ (OICA 2022), and according to the OECD and WTO databases, the Czech Transport equipment sector's GROSS EXPORTS in 2018 were almost three times as high as in 1995.

⁷ Šároch, Stanislav. "Automotive Industry in the Czech Republic." Essay. In *AUTOMOTIVE INDUSTRY IN THE CONTEMPORARY ECONOMY* 1, 1:46–75. Mladá Boleslav: ŠKODA AUTO Vysoká škola o.p.s, 2022.. Accessed July 20, 2023. <https://cld.bz/tfjMhTu/2/>.

⁸ Vlčková, Jana. "Visegrad Countries in Global Production Networks: Value Creation, Control and Capture". *Geographia Polonica* 91, no. 4 (2018): 427–48. <https://doi.org/10.7163/GPol.0129>.

⁹ AUTOMOTIVE INDUSTRY ASSOCIATION(AutoSAP). "Export direction of the Czech car industry in 2021. General basic overview of the Czech automotive industry." Accessed July 28, 2023. <https://autosap.cz/zakladni-prehledy-automotive/obecne-zakladni-prehledy/>

¹⁰Pavlínek, Petr. 2008. "Central and East European Automobile Industry." "In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 1-32. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

¹¹ INTERNATIONAL ORGANIZATION OF MOTOR VEHICLE MANUFACTURERS (OICA). "2022 PRODUCTION STATISTICS." Accessed July 20, 2023. <https://www.oica.net/category/production-statistics/2022-statistics/>

Table 1: Total Czech exports of transport equipment, 1995-2018

1995	1998	2001	2004	2007	2010	2013	2016	2018
1 656,9	3 436,9	5 018,1	11 086,5	22 266,3	26 124,1	31850,7	37 753,6	45 618,8

Source: OECD Statistics on Trade in Value Added¹²unit: US Dollar, Millions

In 2019, the number of people directly employed in automobiles in the EU was 2.6 million people, and the Czech Republic had 181,862 of them, or 13.8 per cent, ranking fourth and exceeding the EU average. At 7.7 cars per employee in the automotive manufacturing sector, the Czech Republic ranks ninth in Europe, also exceeding the EU average (7.1), and produces 1.1 million private cars, ranking third in the EU after Germany and Spain¹³. The Czech automotive sector in 2021 contributes to 26 per cent of the manufacturing sector's sales and 24 per cent of the Czech Republic's total exports. With more than 1.4 million car motor vehicles produced annually before the pandemic, the Czech Republic is among the world's top producers of motor vehicles, and in 2021, the Czech Republic is still the world's second-largest producer of passenger vehicles per capita, with the highest production of buses in the world.¹⁴ Employment, above-average wages and tax revenues in the automotive industry have a positive impact not only on the development of almost all regions of the Czech Republic but also on the domestic budget, with the industry's annual contribution in terms of direct and mandatory taxation estimated at CZK 70 billion.¹⁵

In order to maximise the advantages of cheap Czech labour, the Czech Republic, together with the whole of Central Europe, is primarily responsible for the mass production of small passenger cars, the manufacture of automotive components, and the assembly of cars in the European automotive production system. According to the data of the Czech Statistical Office and the Ministry of Industry and Trade, in 2020 there were 1,106 active entities in the

¹² OECD (2023), "Trade in value added", OECD Statistics on Trade in Value Added (database). Accessed July 20, 2023. <https://doi.org/10.1787/data-00648-en>

¹³ Guzik, Robert, Bolesław Domański, and Krzysztof Gwosdz. 2020. "Automotive Industry Dynamics in Central Europe." In *Automotive Industry Dynamics in Central Europe*, 377-397. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-18881-8_15.

¹⁴ Šaroč, Stanislav. "Automotive Industry in the Czech Republic." Essay. In *AUTOMOTIVE INDUSTRY IN THE CONTEMPORARY ECONOMY* 1, 1:46. Mladá Boleslav: ŠKODA AUTO Vysoká škola o.p.s, 2022. Accessed July 20, 2023. <https://cld.bz/tfjMhTu/2/>.

¹⁵ AUTOMOTIVE INDUSTRY ASSOCIATION(AUTOSAP). "Solid results of the Czech car industry despite a decline in production ," 2021. Accessed July 20, 2023. <https://autosap.cz/aktualita/2021-solidni-vysl-edky-ceskeho-autoprumyslu-navzdory-poklesu-vyroby/>

Czech Republic in the CZ-NACE 29 Motor Vehicle Manufacturing, of which 89 were engaged in the manufacture of motor vehicles and their engines (CZ-NACE 29.1), 163 in the manufacture of car bodies (29.2), and 854 in the manufacture of components (29.2)¹⁶. 99.5 % of the motor vehicles produced in the Czech Republic each year are passenger cars, and according to AutoSAP of the Czech Republic, the most produced volume in the country in 2021 was private passenger cars, which accounted for about 73 % of the total car production.¹⁷ The production of electric vehicles is slowly rising, with battery electric vehicles and plug-in hybrids accounting for 11% of total passenger car production in 2021¹⁸. The production of automotive components is an important part of the Czech automotive industry, and the Czech Republic plays a dual role in the European automotive industry, manufacturing simple labour-intensive components and supplying advanced, high-value-added components.¹⁹ Relying on the advantages of close proximity to Germany, cheap labour costs and macroeconomic stability, the Czech region's interaction with large foreign-owned automotive companies developed dynamic localisation capabilities, and the region became embedded in an extensive regional supplier network, with many newly built factories featuring high volume production, good quality and flexibility, resulting in economies of scale. Certain foreign automotive component companies have invested in the Czech region and with the significant investment of foreign companies into the Czech automotive industry, the Czech Republic has been able to integrate into the global supply network of these large multinational automotive companies, and the technology and knowledge, as well as the management models of the foreign companies, have spilt over to the Czech automotive companies, in addition to the fact that they have integrated design into their manufacturing or set up research and development centres in the Czech Republic to capitalise on the strengths of the automotive manufacturing industry in Central Europe. These advantages have also contributed to some functional upgrading within the Czech parts

¹⁶ Šaroch, Stanislav. "Automotive Industry in the Czech Republic." Essay. In *AUTOMOTIVE INDUSTRY IN THE CONTEMPORARY ECONOMY* 1, 1:53-54. Mladá Boleslav: ŠKODA AUTO Vysoká škola o.p.s, 2022. Accessed July 20, 2023. <https://cld.bz/tfjMhTu/2/>.

¹⁷ AUTOMOTIVE INDUSTRY ASSOCIATION(AutoSAP). "Vehicle fleet of the Czech Republic 2021. General basic overview of the Czech automotive industry. " Accessed July 20, 2023. <https://autosap.cz/zakladni-prehledy-automotive/obecne-zakladni-prehledy/>

¹⁸ Šaroch, Stanislav. "Automotive Industry in the Czech Republic." Essay. In *AUTOMOTIVE INDUSTRY IN THE CONTEMPORARY ECONOMY* 1, 1:48. Mladá Boleslav: ŠKODA AUTO Vysoká škola o.p.s, 2022. Accessed July 20, 2023. <https://cld.bz/tfjMhTu/2/>.

¹⁹ Pavlínek, Petr, Bolesław Domański, and Robert Guzik. 'Industrial Upgrading Through Foreign Direct Investment in Central European Automotive Manufacturing'. *European Urban and Regional Studies* 16, no. 1 (January 2009): 43–63. <https://doi.org/10.1177/0969776408098932>.

industry. However, during the influx of foreign investment, a large number of capable domestic suppliers were taken over by foreign investors, and a large number of suppliers were excluded from the industry chain by the dominant firms under the crowding-out effect of FDI. The entry of multinational dominant firms has improved the overall competitiveness of the Czech automotive industry, but it has also established the long-term marginal position of the Czech automotive parts industry, where local Czech firms are at a disadvantage in terms of both capital size and production technology, the scope for functional upgrading of the region's automotive industry is relatively limited, and the dependence on foreign firms and the secondary position of local firms have limited the functionality of the domestic suppliers upgrading, and due to standardised scale production, Czech car manufacturing is rarely accompanied by the development of design capabilities, which limits their profitability and hence their ability to invest in product development.

Despite the successful integration of the Czech automotive industry into the GVC as an "integrated peripheral market" over the last 30 years, the dependence on foreign capital and exports has resulted in the Czech automotive industry remaining semi-peripheral to the GVC. According to the OECD and WTO databases, in 2018 the foreign value added (backward participation) in exports of transport equipment amounted to 56.9 per cent²⁰, compared to 5.7 per cent in the 'GVC forward linkage' indicator²¹. The vast majority of vehicles produced in the Czech Republic are exported, and of the 1.12 million motor vehicles produced in the Czech Republic in 2021, only 99,000 will be sold on the Czech market, with the remaining 1.01 million vehicles exported abroad, with a clear export-orientation feature.²²

The semi-peripheral position of the Czech automotive industry in the global value chain may cause many problems. Due to the fact that TNCs have a strong voice in the Czech automotive industry, the Czech Republic has little control over the value created, a large amount of the value created does not stay in the Czech Republic but is transferred abroad, and the linkages

²⁰ World Trade Organization(WTO). "Trade in value-added and global value chains: statistical profiles-Czech Republic." Accessed August 1, 2023. https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e.htm

²¹ OECD (2023), "Trade in value added", OECD Statistics on Trade in Value Added (database). Accessed July 20, 2023. <https://doi.org/10.1787/data-00648-en>

²² Šároch, Stanislav. "Automotive Industry in the Czech Republic." Essay. In *AUTOMOTIVE INDUSTRY IN THE CONTEMPORARY ECONOMY* 1, 1:64. Mladá Boleslav: ŠKODA AUTO Vysoká škola o.p.s, 2022. Accessed July 20, 2023. <https://cld.bz/tfjMhTu/2/>.

and technology transfer between TNCs and local suppliers in the Czech Republic is weak, with very limited economic spillovers to the local Czech economy, which results in a low cost of exit from the Czech Republic for foreign investors. The export-led development model has also created instability in the Czech automotive industry. Cheap labour is still an important reason for attracting foreign investment to the Czech automotive industry, but the development brought by low labour prices is very unstable. As the cost of labour in the Czech Republic rises, multinationals may exit the country for lower costs and seek new countries to invest in, so the employment brought by foreign investment to the automotive industry is also unstable. In addition, foreign companies take advantage of the country's policy of attracting foreign investment to compete with local companies, whether in terms of technology or competition for talent, local companies do not have any advantage, which will lead to difficulties in the sustainable development of local companies. This creates difficulties for further upgrading of the Czech automotive industry. The absolute role of foreign capital in the Czech automotive industry has caused the marginalised Czech automotive industry to be very limited in its upgrading in the global value chain as well. A large part of FDI in the Czech automotive industry goes into low-value-added component assembly. Although the investment in R&D in the Czech automotive industry has increased, it is still very limited, and the importance of R&D in foreign companies is very low, and the R&D investment of foreign companies can be cut down more easily in times of economic crisis.²³ The position in the value chain determines the position in the distribution, and most of the Czech automotive industry remains labour-intensive, while only in a few automotive manufacturing firms do knowledge-intensive economic activities occupy an important position. In addition to this the Czech tier 1 suppliers are also mostly foreign companies, while domestic companies are mostly lower tier 3 suppliers, providing simpler component parts and intermediate products, responsible for assembly and low-tech standardised component production, which is characterised by low wages simple technology and low transfer costs, which puts the Czech Republic in a disadvantageous position in the value chain, as the tier 3 suppliers are strategically coupled in the global production network have no or very low bargaining power and are in the most unfavourable and vulnerable position in the global value chain, where tier 1 suppliers and TNCs tighten their control over domestic

²³ Pavlínek, Petr. 2017. "Upgrading." In *Dependent Growth: Foreign Direct Investment and the Development of the Automotive Industry*, 75-107. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-319-53955-3_1.

suppliers by imposing increasingly stringent standards and regulatory procedures, while constantly demanding that they lower their prices to keep costs down. Therefore, local Czech suppliers need to comply with increasingly stringent standards and at the same time absorb increasing production costs and business risks.

Only Škoda is a second-tier company in the Czech Republic, with several integrated R&D centres. In value chain upgrading, the Czech upgrading has focused on process and product upgrading, which is mainly aimed at increasing production efficiency and productivity and keeping prices low in exports to remain competitive, while conditions for improving functional upgrading, which is the most important in terms of position in GVCs, are much less favourable. The lack of dominant capacity has contributed to the further marginalisation of Czech automotive component suppliers in the global automotive value chain. Although the Czech automotive industry has improved its position in the global automotive value chain over the past 30 years, the industry is almost entirely dominated by foreign multinationals, and local Czech companies have a very low level of voice, relying mainly on foreign investment for the development of new technologies and knowledge, transfer of technology and management methods, and being subsidiaries of multinationals that are highly restricted in terms of R&D investment, and innovation at the local level. The limitations on R&D investment as subsidiaries of multinational automotive companies, the fact that innovation at the local level relies mainly on innovation cooperation with universities and R&D organisations, and the weak horizontal linkages with competing firms have weakened the Czech automotive industry's ability to sustain its development. Due to limited upgrading in the global value chain, the Czech automotive industry remains marginalised in the global automotive production network.²⁴

The automotive industry is currently undergoing rapid changes with the fourth industrial revolution, and Freyssenet (2009) talks about the beginning of the second automotive revolution. The beginning of the second automotive revolution refers to technological changes, the process of technological change from petroleum-fuelled internal combustion engines to alternative environmentally friendly drive systems and the mass production of

²⁴ Pavlínek, P., & Janák, L. (2007). Regional Restructuring of the Škoda Auto Supplier Network in the Czech Republic. *European Urban and Regional Studies*, 14(2), 133–155. <https://doi.org/10.1177/0969776407076101>

electric vehicles presents both challenges and opportunities for the Czech automotive industry. Taking these trends into account, traditional OEMs will endeavour, with the support of their governments, to prolong the country's old industrial system and create the conditions for a new one. They will also create the conditions for new business models to extend the range of products they offer, including options for electric vehicles, self-driving vehicles and car-sharing services.²⁵ On the one hand, the continued development of automated production and the rising costs of production in Central Europe and the lack of technological upgrading of electric vehicle production may lead to the loss of the Czech automotive industry's advantages and the relocation of the industry outside the region, but on the other hand, the crisis will also push the region's automotive manufacturers to move towards more sophisticated technologies, and a shift to higher value-added and automated products. 2017 The Association of the Czech Automotive Industry (AutoSap) and the Government of the Czech Republic concluded a memorandum of understanding in 2017 dedicated to the promotion of autonomous driving and green cars in the Czech automotive sector.²⁶ As one of the most important companies in the development of the Czech automotive industry sector, Škoda is also actively engaged in the technological transformation of cars as an important task in the development of the company.²⁷

Since the beginning of the century, through large-scale investments by large foreign automotive multinationals, the Czech Republic has managed to integrate itself from an isolated periphery into the core of the European automotive production system, becoming an emerging region of global automotive production and one of the countries with the highest level of integration into the GPN in the world.

²⁵ Covarrubias V., Alex, and Sigfrido M Ramirez Perez. 2020. "Introduction: Changing Geographies and Frontiers of the Automotive Industry." In *Introduction: Changing Geographies and Frontiers of the Automotive Industry*, 1-38. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-030-18881-8_1.

²⁶ Transport Research Centre. "Memorandum on the future of the automotive industry in the Czech Republic." Transport Research Centre, 2023, Brno. Accessed August 1, 2023. www.autonomne.cz/informace-o-testování-bezpečnosti-a-provozu-autonomních-vozidel

²⁷ ŠKODA AUTO A.S. "Annual reports 2022". 2023. Accessed July 28, 2023. https://cdn.Škoda-storyboard.com/2023/03/Škoda-Auto-Annual-Report-2022-EN_128a4978.pdf?_gl=1*_1tk3t8*GA4_ga*YTJiY2NhMmEtOTA0Zi00NDM3LThiMmMtMTI3ZWQyNTUyYTg2*GA4_ga_CR52PEW89M*MTY4OTgwNTIwM_S4yLjEuMTY4OTgwNTIxMS4wLjAuMA.

However, as an integrated peripheral market, the Czech Republic is highly dependent on foreign capital and has a strong export-orientated character. The Czech automotive industry will continue to be an important part of the Czech economy by virtue of its geographical advantage of proximity to the core of this region (Germany) and its high quality and cheap labour force, it will remain attractive for foreign investment. Relying on the economies of scale created in Central Europe and the semi-peripheral status brought about by continuous upgrading, the Czech automotive industry will continue to be an important part of the Czech economy, and the continuous upgrading of the relevant enterprises will drive the sustained development of the Czech automotive industry. However, due to the dominant position of multinational corporations, despite upgrading, the Czech automotive industry will continue to be on the periphery of the global value chain, with technology and resources still in the hands of powerful multinational corporations, and the Czech automotive industry will concede more benefits and face greater pressure in participating in the global production network. The rapid growth of the automotive labour market has also challenged the capacity of existing Czech institutional arrangements to train, hire, certify and pay workers, as well as to manage industrial relations. Some studies have argued that the potential for threats to workers' power and incomes is increased by shifting more production to regions like the Czech Republic where cheap labour is available, as integration into global production networks increases the power of dominant firms, giving them greater leverage to demand freezing of firm wages and labour concessions.²⁸ The successful transformation of the Czech automotive industry and its integration into the global value chain of automotive production in the three decades after 1990 was made possible by the policies of the government, which played a variety of governance roles in the participation of the automotive industry in the global value chain and the global production network, and in the next section I will analyse how the Czech government played a role in the participation of the Czech automotive industry in the global value chain after 1990.

²⁸ Covarrubias V., Alex, and Sigfrido M Ramirez Perez. 2020. "Introduction: Changing Geographies and Frontiers of the Automotive Industry." In *Introduction: Changing Geographies and Frontiers of the Automotive Industry*, 1-38. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-030-18881-8_1.

2. Analysis of the Role of State Governance in the Czech Automotive Industry's Involvement in GVCs and GPNs

Along with the investment strategies of global automotive industry leaders, national policies have played a key role in the rapid progress of the automotive industry in underdeveloped 'emerging' economies from the early 1990s onwards. Pavlík identifies national policies as one of the three most important factors in the development of the automotive industry in "emerging" countries. Pavlík identifies state policy as one of the three most important factors in the development of the automotive industry in "emerging" countries,²⁹ and Covarrubias³⁰ also points out that in emerging countries where the automotive industry is developing, the state has been the constructor of their production and social life at key moments in history. From the previous section, it is easy to see how the Czech government's active facilitation of the joint venture agreement between Škoda and Volkswagen after 1989, as well as the attraction of foreign investment and the support of technology and business service centres after 1998, had a significant impact on the transformation of the Czech automotive industry and its repositioning and upgrading in the GVCs. In this part, I will use Mayer's typological definition³¹ of the three key roles of the state in GVCs, i.e. facilitator, manager and distributor, as a basis to analyse the role of state governance in the participation of Czech cars in GVCs after the economic transformation in 1990.

²⁹ Pavlínek, Petr, Bolesław Domański, and Robert Guzik. 'Industrial Upgrading Through Foreign Direct Investment in Central European Automotive Manufacturing'. *European Urban and Regional Studies* 16, no. 1 (January 2009): 43–63. <https://doi.org/10.1177/0969776408098932>.

³⁰ Covarrubias V., Alex, and Sigfrido M Ramírez Perez. 2020. "Introduction: Changing Geographies and Frontiers of the Automotive Industry." In *Introduction: Changing Geographies and Frontiers of the Automotive Industry*, 1-38. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-030-18881-8_1.

³¹ Mayer, Frederick W., and Nicola Phillips. 'Outsourcing Governance: States and the Politics of a "Global Value Chain World"'. *New Political Economy* 22, no. 2 (4 March 2017): 134–52. <https://doi.org/10.1080/13563467.2016.1273341>.

2.1 State as Facilitator

As Rory Horner argues, it is the role of the state as a facilitator that is most important in the governance of GVCs, and it is from facilitative governance that research on the role of state governance in GVCs begins.³² Gereffi suggests that, in an export-orientated model of development, "the government is primarily a facilitator"³³. After the end of the socialist planned economy in 1989, the Czech automotive industry underwent a series of transformations, and in the process of integrating the Czech automotive industry into the global automotive sector, the Czech government introduced a series of policies aimed at constructing a free market, assisting in the privatisation and post-communist reconstruction and upgrading of the Czech automotive industry, and attracting foreign investment and technology. In the process of the Czech automotive industry's participation in the GPNs of automotive played an important role in promoting it. Especially during the post-socialist transformation of the Czech automotive industry, state policies for trade liberalisation and privatisation played a key role in the transformation of the Czech automotive industry after 1990.

After the political revolution in 1989, the Czech government laid some foundations for the construction of a market economy by abolishing the Planning Council, the Price Council and the state monopoly on foreign trade, as well as introducing or amending relevant laws for the private sector and for the formation and operation of joint-stock companies and joint ventures, which have greatly improved the Czech investment conditions, and the stable macroeconomic and market economy laws have laid the foundation for the entry of foreign investment into the Czech Republic. Stable macroeconomic and market economy laws have laid the foundation for foreign investment in the Czech Republic. As a result of the country's open trade policy, since trade liberalisation in January 1991, the Czech Republic has "maintained a very liberal trade regime; the average import tariff is 5% and there are no serious administrative barriers to trade" and has actively participated in global and regional trade organisations, becoming a party to a number of agreements on international trade

³² Horner, Rory. "Beyond Facilitator? State Roles in Global Value Chains and Global Production Networks". *Geography Compass* 11, no. 2 (February 2017): e12307. <https://doi.org/10.1111/gec3.12307>.

³³ Gereffi, Gary. "The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks." Chapter. In *Global Value Chains and Development: Redefining the Contours of 21st Century Capitalism*, 43–71. Development Trajectories in Global Value Chains. Cambridge: Cambridge University Press, 2018. doi:10.1017/9781108559423.003.

liberalisation. The Czech Republic has been a member of the World Trade Organisation (WTO) since 1994 and has been aiming to join the European Union (EU) since the revolution, successfully becoming a member in 2004. The Czech Republic is also one of the founding members of the Central European Free Trade Agreement (CEFTA) and has signed bilateral free trade agreements with several other countries, actively participating in trade organisations and liberalising trade.³⁴ It is the national and international development strategy premised on liberalisation and deregulation implemented by the state after the economic reforms that has created a range of development environments such as low trade barriers, secure property rights including investment and intellectual property rights protection, and tolerance of concentration of market power for the Czech automotive industry in the GVCs. In participating in regional and bilateral trade organisations, the state has to a certain extent increased the bargaining power of the Czech automotive industry in strategic coupling.

At the beginning of the economic reforms, the Czech government, in promoting the privatisation of state-owned enterprises, played an important role in the negotiations between Czech automotive companies and multinational automobiles. The most representative of these was the active facilitation of the joint venture agreement between Škoda and Volkswagen. The terms negotiated by the Czech government in the 1989 joint venture agreement with Volkswagen Germany called for the retention of the Škoda brand and included provisions to protect Czech parts suppliers and Škoda workers. This protected Škoda's Czech suppliers from being replaced by foreign suppliers for a certain period of time after the establishment of the joint venture, which gave Škoda's domestic suppliers a limited time to upgrade. The signing of the joint venture agreement helped Škoda to successfully reorganise itself, retaining the Škoda brand, supply system and research and development functions. Škoda became a subsidiary of Volkswagen but retained a certain degree of autonomy and did not become merely an assembly plant for Volkswagen. However, in order to facilitate the acquisition of Škoda by Volkswagen, the Czech government offered a large number of favourable conditions to Volkswagen, which to a certain extent weakened the competitiveness of Czech local enterprises. The reorganisation of the Czech auto components industry under pressure from Škoda's restructuring has forced it to produce

³⁴ Dangerfield Martin. 'Ideology and the Czech Transformation: Neoliberal Rhetoric or Neoliberal Reality?' *East European Politics and Societies: and Cultures* 11, no. 3 (September 1997): 436–69. <https://doi.org/10.1177/0888325497011003002>.

simpler components than in the past and to lower their prices, which has also reduced their ability to continuously upgrade their functionality. In addition to the strong dependence of Škoda on Volkswagen, which has led to strong external dependence of the Czech automotive industry, the transformation process has also strengthened the external dependence of the Czech automotive industry as a result of a large number of domestic component factories going bankrupt due to a lack of competitiveness or setting up joint ventures with foreign investors. This creates additional risks for Czech automotive participation in global value chains. In addition to this, the success of cheap Škoda products in competing with other more expensive VW products in Western Europe was perceived by VW as squeezing its market in Western Europe, and Škoda was positioned as the cheapest of the VW brands in VW's brand segmentation and differentiation in 2001, which further weakened Škoda's autonomy and impacted on the brand's renewal and R&D further.³⁵ Further development of the brand and R&D. These effects may cause Škoda to continue to rely on the one advantage of good value for money, which in turn will affect Škoda's competitiveness in the future, as has been seen in recent developments in the Chinese market.³⁶

The state policy on trade attraction of FDI also played a key role in facilitating the participation of the Czech automotive industry in global value chains after the economic transition. The government's policy on FDI strongly influenced FDI inflows into the Czech Republic after the reforms and had an impact on the transformation and upgrading of the Czech automotive components sector in the 1990s. Among the CEE countries, the Czech Republic has one of the highest inflows of foreign investment in the automotive sector, with CZK 413,640 mil in FDI in motor vehicle production over the three decades 1992-2022, according to Czechinvest,³⁷ the most of any sector. At the beginning of the economic reforms, the Klaus government was sceptical of foreign investment and did not provide many supportive policies for FDI. In the case of voucher privatisation, the government encouraged the participation of large national companies more, and in the case of direct sales, the Czech buyers had more advantages than the foreign buyers. During the period of 1992-1996, the

³⁵ Pavlínek, Petr. 2008. "Post-1989 Transformation of Škoda Auto." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 79-124. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

³⁶ Tan, Jing-Bao. "Škoda rings the bell of doom. Automotive Observer." 2022 (04), 16-17. DOI:CNKI:SUN:QCGA.0.2022-04-005.

³⁷ CZECHINVEST. "FDI Report - 30 let agentury." CzechInvest, November. 2022., Prague Accessed August 20, 2023. <https://www.czechinvest.org/cz/Cesko-v-datech/Reporty-a-pruzkumy/FDI-Report>

government's economic nationalism did not encourage formulas to seek foreign partners and to form joint ventures. These measures led to a large lack of domestic capital, fragmented company ownership and weak corporate governance. Due to lack of capital, poor management and technological backwardness, many automobile firms were unable to adapt to the pressures of competing in the global market and went bankrupt.³⁸ But despite this period, the state also supported the entry of some foreign capital into the Czech Republic, and in order to facilitate the acquisition of Škoda Auto by Volkswagen prior to 1990, the Czech government offered a series of favourable conditions at the time of the signing of the joint venture agreement, including Volkswagen obtaining from the Czech government a two-year tax holiday of 19 per cent of tariffs in order to protect the Czech market from foreign competition, and a commitment to increase non-tariff barriers in the event of an increase in foreign car imports. Commitments to finance the upgrade of Škoda's telecommunication system to Western European levels; to reduce the sales tax so that it did not exceed the highest level in Western European car-producing countries; and to guarantee that Škoda's monopoly in the domestic market would not be challenged under Czech antitrust law, among other things. These conditions went a long way towards facilitating Škoda's smooth transition after the economic reforms, which Škoda completed with VW's help, and Škoda's Czech suppliers entered VW's supply network.³⁹

After the failure of early nationalist privatisations, the attitude of the next Czech government towards foreign capital shifted from hostility and caution to openness and inclusiveness after 1998, when the government realised that there was a lack of capital for rapid privatisation in the country after a long period of socialist planning, and made increasing FDI inflows one of its goals by greatly increasing incentives and support for FDI, which set off a wave of investment in automobiles. This set off a boom in automotive investment, with a significant increase in foreign investment, including in-car assembly and car sales. The support provided by the Government included corporate tax breaks, zero tariffs on imported equipment, job creation grants, training and retraining grants, and the provision of infrastructure and favourable land. These incentives apply to new investments exceeding

³⁸ Randa, Michal. 2015. "*The role of the state in the development of the Czech automotive industry.*" 2015. dissertation. Charles University, Faculty of Science, Department of Social Geography and Region. rozvoje. Thesis supervisor Pavlínek, Petr.

³⁹ Pavlínek, Petr. 2008. "Post-1989 Transformation of Škoda Auto." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 79-124. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

twenty-five million dollars over a five-year period and are gradually reduced to five million dollars thereafter.⁴⁰ And since the enactment of the Investment Incentives Act in May 2000, the introduction of new production and the expansion or modernisation of existing production facilities for the purpose of introducing new production and expanding or modernising existing production facilities are also eligible for government incentives.⁴¹

Thanks to investment incentives after 1997, FDI into the Czech Republic increased considerably, TMMCZ - Toyota Motor and Hyundai Motor Manufacturing Company (HMMC) built factories in the Czech Republic in 2005 and 2008, respectively, and Japan's Denso invested in a factory in the Czech Republic (automotive air-conditioning production) in 2001, and together with Volkswagen these companies are to this day the largest Czech investor.⁴² This support may still be key to attracting FDI into the automotive sector, and in the results of a survey of companies engaged in industry and services in the Czech Republic at the annual conference of the Czech Association for Foreign Investment (CAFI) in September 2022, 68 per cent of the firms believed that government investment incentives have boosted the Czech economy as a whole.⁴³ These policies have contributed to the further development of the Czech automotive industry, which, through the continued entry of foreign companies, has become more deeply involved in the global automotive value chain and has contributed to the upgrading of the Czech automotive industry in the global value chain. The entry of multinational automotive companies into the Czech Republic has been greatly facilitated by favourable government policies. As in the case of Škoda, the participation of foreign companies brought more effective management methods and technologies to the Czech automotive industry and helped Czech automotive companies to transition more quickly into the Western European market and accelerated the participation of the Czech automotive industry in the global value chain. They have each received generous investment incentives from the Czech Republic, which has offered TPCA a 10-

⁴⁰ Pavlínek, P., and J. Zenka. "Upgrading in the Automotive Industry: Firm-Level Evidence from Central Europe." *Journal of Economic Geography* 11, no. 3 (1 May 2011): 559–86. <https://doi.org/10.1093/jeg/lbq023>.

⁴¹ Pavlínek, Petr. 2008. "The Role of FDI in the Czech Automotive Industry." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 185-225. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

⁴² CZECHINVEST. "FDI Report - 30 let agentury." CzechInvest, November. 2022.,Prague. Accessed August 1, 2023. <https://www.czechinvest.org/cz/Cesko-v-datech/Reporty-a-pruzkumy/FDI-Report>

⁴³ Bautzová, Libuše. "Kamil Blažek for Czech Car Industry: The relocation of companies will happen anyway." 11 November 2022. Accessed August 1, 2023. <https://autosap.cz/aktualita/kamil-blazek-pro-cesky-autoprmysl-ke-stehovani-firem-dojde-tak-jako-tak/>

year tax holiday and CZK 80,000 for every job created, in addition to subsidies for plant construction, assistance in training workers and preferential conditions for the construction of kilometres connecting the plant and the D5 highway. In order to attract South Korea's Hyundai the Czech government has promised to offer it CZK 1.3 billion worth of tax exemptions, CZK 200,000 for every job created, as well as incentives such as subsidies for plant construction and worker training.⁴⁴

The Czech Government has also introduced support policies for technology and service centres. In addition, the automotive industry is a leader in Czech industrial science, research and innovation and accounts for almost one-third of all industrial R&D investments in the Czech Republic, both in terms of growth in the proportion of R&D personnel in companies and in terms of total investments.⁴⁵ (R&D subsidies, export subsidies, subsidies to SMEs, subsidies for technology transfer and various sectoral business plans provided by the government have contributed to the functional upgrading of Czech automotive companies and the gradual improvement of their relative position in the GVCs.

Although the country's foreign investment attraction policies have attracted significant FDI to the Czech automotive industry and facilitated the integration of the Czech automotive industry into the global value chain, these foreign investment introduction policies have also hindered to a certain extent the continuous upgrading of the Czech automotive industry in the global chain, by favouring foreign investment in the Czech Republic more than the development of domestic automotive companies. As foreign companies tend to be large, they are more likely to fulfil the conditions of government incentives (tax exemptions or policies providing employment), through which foreign companies can often offer better conditions to poach highly qualified personnel from local companies, thus limiting the innovative capacity and sustainable development of local companies.⁴⁶ And the core automotive multinationals are now strengthening their dominant position in the production and upgrading of the automotive industry in the Czech region by increasing their investments

⁴⁴ Randa, Michal. 2015. *"The role of the state in the development of the Czech automotive industry."* 2015. dissertation. Charles University, Faculty of Science, Department of Social Geography and Region. rozvoje. T hesis supervisor Pavlínek, Petr.

⁴⁵ AUTOMOTIVE INDUSTRY ASSOCIATION(AutoSAP). "2021: Solid results of the Czech car industry despite a decline in production." Accessed July 20, 2023. <https://autosap.cz/aktualita/2021-solidni-vysledky-c-eskeho-autoprmyslu-navzdory-poklesu-vyroby/>

⁴⁶ Vlčková, Jana. 'Visegrad Countries in Global Production Networks: Value Creation, Control and Capture'. *Geographia Polonica* 91, no. 4 (2018): 427–48. <https://doi.org/10.7163/GPol.0129>.

through these policies. Czech national industrial policy largely serves the needs of foreign capital, resulting in a competitive disadvantage for domestic cars and a dependent economy for the entire automotive industry, limiting the independence of the Czech automotive industry, and consequently affecting the Czech Republic's ability to pursue an independent industrial development policy. Large-scale investment incentives and tax breaks have also weakened the state's ability to invest more in domestic research and human resource development, among other things, which in turn has led to further dependence of the Czech automotive industry on foreign capital. This extreme dependence on foreign capital also reveals the weakness and persistent marginalisation of the Czech Republic in the European automotive industry system.

The role of facilitator was one of the most important roles played by the state in the participation of the Czech automotive industry in GVCs after the economic reforms. The large inflow of foreign investment after the economic reforms became the main driving force behind the rapid transformation of the Czech automotive industry after 1990, and the Czech government's incentive policy for foreign investment created highly favourable conditions for attracting foreign capital to the Czech Republic and for the development of foreign-owned companies in the country. Through tax incentives, subsidies, export processing zones, R&D incentives, implementation and negotiation of favourable trade policies, and interstate lobbying, the state's proactive involvement shaped the position of the Czech automotive industry in the global automotive value chain after 1990. The range of policies that supported the liberalisation of the Czech automotive market, attracted foreign investment and were involved in facilitating the rapid privatisation of the Czech automotive industry were all established by the state, which continues to play a central role in facilitative governance, i.e. policies that support the formation and functioning of global value chains. The establishment of the free market created low trade barriers for multinational automotive companies to enter the Czech Republic and for Czech automotive products to enter the global market, the protection of investment and intellectual property rights, and it was the free market environment created by the state that attracted foreign investment and enabled the Czech automotive industry to rapidly complete its transformation and actively integrate into the global production network of the automotive industry, becoming a rising member of the global automotive industry. The Czech Republic has become a rising star in the global automotive industry. Membership in several global and regional trade organisations has also

strengthened the business environment conducive to the functioning of global value chains, helping to connect the Czech automotive sector to the world's automotive production networks and the global value chains of the automotive industry. At the same time, however, it has also affected the long-term marginal position of the Czech automotive industry in GVCs, where tolerance of facilitated governance and centralised production and the high costs paid to attract multinational corporations (MNCs) have put the Czech automotive industry at a disadvantage in strategic coupling with MNCs, and where dependence on foreign investment and exports will create difficulties in sustaining upgrading of the automotive industry in GVCs.

2.2 State as Regulator

Despite the fact that the role of the state in the economy was significantly reduced through liberalisation, privatisation and marketisation policies after the neo-liberal economic reforms of 1990, the regulatory role played by the state government in the transformation of the Czech automotive industry is still noteworthy. First of all, the regulation of foreign investment in different periods of time, due to the different attitudes of the main political parties of the government towards foreign investment in different periods of time led to different regulatory policies towards foreign investment in the Czech automotive industry in different periods of time. Before the parliamentary elections of 1992, the Czech government took a cautious approach to the selection of foreign partners for the Czech automotive companies and offered incentives to the selected foreign investors. The most successful joint ventures in the Czech automotive industry were established during this period. During the right-leaning government of 1992-1997, however, the government restricted the establishment of joint ventures with foreign investors in favour of supporting Czech capital due to scepticism about foreign investment. The government prevented foreign companies from establishing joint ventures in the Czech Republic by imposing unrealistic requirements on foreign companies, prolonging or preventing joint venture negotiations or outright refusing to approve sales, and the government's excessive intervention in the privatisation of automotive firms with foreign capital led to the failure of many Czech automotive companies to transform or even go bankrupt.⁴⁷ The government's restrictions on foreign investment were not reduced until 1998, when the new government's attitude towards foreign investment changed and restrictions on foreign investment in the Czech automotive industry were reduced.

The regulatory governance of the automotive industry's participation in GVCs has been privatised since 1990, with the state gradually ceding authority over automotive industry standards and labour regulation to the market or to the dominant firms in the automotive industry. The failures of the socialist planned economy prior to the economic transformation, where labour regulation, quality control and standards enforcement in the automotive industry were all under state regulation, led to the withdrawal of the state from the regulatory

⁴⁷ Pavlínek, Petr. 2008. "The Role of FDI in the Czech Automotive Industry." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 185-225. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

governance of the automotive industry after 1989's transition. Through the privatisation of state-owned automobile companies and the construction of a free market, the state shifted its control over prices from the state plan to the market, while foreign TNCs brought in advanced quality standards and management methods, and regulation of quality and standards shifted from the state to foreign TNCs.

Volkswagen (VW) played a decisive role in the restructuring of the Czech automotive industry after 1990 through the acquisition and reorganisation of the Czech company Škoda. The new joint venture introduced new management methods, work organisation and quality control, and the new "organisation and order" replaced the socialist work organisation and workshop production with the capitalist work organisation and workshop production. As a result of these measures, labour discipline in the Czech automotive industry was greatly improved, and product quality and productivity were significantly increased. In addition to this, Škoda brought new standard requirements for its automotive suppliers, which facilitated the change of production standards for the entire Czech automotive industry to advanced Western standards, narrowed the technological and managerial gap between Czech automotive suppliers and the West, and enabled them to enter the global market of automotive production. And Škoda was able to dominate the Czech automotive industry for a long time.⁴⁸

In addition to the significant changes in the structure of labour law after 1989, which reduced the involvement of the state in labour relations and strengthened the contractual nature of labour relations, Czech labour law was harmonised with binding international agreements, the most important of which was the incorporation of the EU directives into Czech labour law in the Labour Law Amendment Act 2000. In the process of amending the labour law, the legislation is no longer exclusively planned by the state but is coordinated by the majority party in the government and the employers' and trade unions' tripartite coordination.⁴⁹ The degree of regulation and flexibility of the Czech labour market is average among European countries and the lowest in Central and Eastern Europe. As a result of the fact that during the socialist period prior to 1989 the Czech trade unions were entirely controlled by the

⁴⁸ Pavlínek, Petr. 2017. "Foreign Direct Investment and the Development of the Automotive Industry." In *Dependent Growth: Foreign Direct Investment and the Development of the Automotive Industry*, 1-46. Switzerland: Springer International Publishing. https://doi.org/10.1007/978-3-319-53955-3_1.

⁴⁹ Vecernik, Jiri. *Labour Market Flexibility and Employment Security. Czech Republic. Employment Paper 2001/27*. Geneva: International Labour Organization, 2001. ISBN 9221127508.

Communist Party, thus severely weakening their legitimacy, the Czech trade unions are fewer in number, more fragmented and regionally diverse than in most Western European countries, with weak or completely absent trade unions in peripheral areas, but still relatively strong in the core of the Czech automotive industry.⁵⁰ Despite their disadvantageous position in the strategic coupling, trade unions continue to play a role in coordinating labour relations in the Czech Republic with large automotive multinationals.

This shift of the regulatory function from the State to firms and markets is not simply the result of an "absence" of public governance or a decline in State capacity; rather, the State itself is at the centre of the construction of this project, and the reduction of regulatory policies and State intervention is itself a product of State choice. The automobile industry itself is a typical example of this privatisation of regulatory governance, where the government chose to make foreign investment and advanced multinational automobile companies the main driving force behind the transformation of the automobile industry in order to revitalise the industry and restore its competitiveness quickly under the neo-liberal strategy of industrial development. The state has taken the initiative to cede to large multinationals the ability to regulate the automotive industry, such as quality control and labour supervision, in order to enable the automotive industry to rapidly complete the transition from planned production to a market economy and to be able to adapt to global competition. The state is not inactive in this process of outsourcing governance, rather the process is the result of a political and ideological project, and although the ruling party of the Czech government at different times had different views on the role of the government in economic development, whether it was motivated by neo-liberal opposition to over-industrialisation policies or by the aim of attracting foreign investment and increasing exports during the period of the centrist and left-wing governments, in the period following the economic reforms, the role of the Czech government in regulatory governance when participating in GVCs was increasingly assumed by private actors, in particular labour and industry standards. The state's proactive ceding of power to the regulator, on the one hand, created a free market that attracted large automotive multinationals to the Czech Republic, and on the other hand, by 'outsourcing' the regulatory role to the lead firms, increased productivity and product quality, which allowed the Czech automotive industry to rapidly

⁵⁰ Pavlínek, P., and J. Ženka. "The 2008-2009 Automotive Industry Crisis and Regional Unemployment in Central Europe." *Cambridge Journal of Regions, Economy and Society* 3, no. 3 (1 November 2010): 349–65. <https://doi.org/10.1093/cjres/rsq026>.

transform itself and integrate into the global automotive market after 1990, and to enter foreign markets. The Czech automotive industry was able to rapidly transform itself after 1990 and integrate into foreign markets and the global automotive production network and value chain.

However, since the outsourcing of the State's regulatory role is mainly driven by the need to accommodate foreign capital demand, especially from large "strategic" investors, the State's withdrawal from regulation for the purpose of upgrading or maintaining the Czech Republic's competitive position in transnational FDI flows in GVCs may also increase the Czech Republic's disadvantage in strategic coupling in global production networks. In less developed countries, the negotiating power of the state has been reduced as a result of the liberalisation of FDI policies and the relinquishment of some control over the national economy. Negotiating power is further weakened by the small domestic market and fierce competition from neighbouring countries with similar elements", which results in the Czech Republic's disadvantaged position in the strategic coupling of the global production network of the automotive industry. Taking advantage of this weak position of the Czech Republic, automotive multinationals engage in regulatory arbitrage in order to obtain the best investment conditions for themselves. This regulatory arbitrage may be the reason why FDI reduces the economic interests of the host country, as it may lead to "corporate capture of national and local institutions and resources".⁵¹ In this case, national and local governments are in an unequal position in the power relationship with foreign capital, and may therefore end up serving the interests and needs of foreign TNCs at the expense of their own interests in global value chains. This seems to be evidenced by some of the problems that occurred after the takeover of Škoda by VW, which, after the establishment of the joint venture, took advantage of the Czech government's lack of interest in the management of the joint venture and its fear that VW might leave the Czech Republic to take advantage of the strategic coupling, which ultimately resulted in Škoda accepting the investment in Škoda that VW had committed to in the unlawful joint venture agreement. In addition to this, VW chose to send managers with economic rather than technical backgrounds to take charge of Škoda's management, transferring German management strategies directly to Škoda, ignoring the long manufacturing traditions and strengths of the Czech car company, and many of Škoda's

⁵¹ Vlčková, Jana. 'Visegrad Countries in Global Production Networks: Value Creation, Control and Capture'. *Geographia Polonica* 91, no. 4 (2018): 427–48. <https://doi.org/10.7163/GPol.0129>.

technical specialists left the company after 1990. In order to reduce costs, VW took advantage of the inexperience and weakness of Škoda's trade unions to use Škoda as a testing ground for its new production methods, introducing a strategy of "strategic in-sourcing", whereby the number of Škoda assembly workers was reduced by the replacement of assembly workers' functions by base-paid, non-unionised suppliers, and the pace of work of the remaining assembly workers was increased, leading to strikes and disputes. This led to strikes, and many of these disputes were blamed by Škoda's trade unions on the inaction of the Czech government.⁵² In addition, in order to attract foreign investment, the government has relaxed its power to regulate environmental protection. Toyota, Hyundai and Skoda have all been granted a relaxation of environmental impact assessment in their investment agreements with the Czech Republic, and in order to obtain investment, the government has ceded its power to regulate environmental protection to the investor, and has even violated the Law on Environmental Assessment.⁵³

In the case of the Czech automotive reintegration into GVCs after 1990, the role of the regulator was shaped by both the state and the lead firms, and although many of the state's regulatory functions in the automotive industry were gradually taken over by the lead firms and the market as a result of neo-liberal transformations and reforms, on the one hand, the state has used labour regulations and investment policies to continue public regulation, particularly in the aftermath of the 2008 economic crisis. On the other hand, the withdrawal of public regulation was not passive, private governance was not shaped independently of political competition, but rather it was shaped to a certain extent by different tendencies of the government, and the regulatory model was shaped as a result of active 'outsourcing' by the state. In the case of the Czech automotive industry, neither private nor public regulation could participate independently in the process of managing the Czech automotive industry in the global value chain; they existed simultaneously.

⁵² Pavlínek, Petr. 2008. "Post-1989 Transformation of Škoda Auto." In: *A Successful Transformation? Restructuring of the Czech Automobile Industry*, 79-124. Heidelberg: Physica-Verlag HD. https://doi.org/10.1007/978-3-7908-2040-9_1

⁵³ Randa, Michal. 2015. "The role of the state in the development of the Czech automotive industry." 2015. dissertation. Charles University, Faculty of Science, Department of Social Geography and Region. rozvoje. Thesis supervisor Pavlínek, Petr.

2.3 State as Distributor

In a globalised economy, inequality is an intrinsic feature, not a bug. Distributive governance in GVCs is concerned with the strategies adopted to shape distributional outcomes, or who gains what, who wins and who loses from particular forms of political economy organisation. In the context of GVCs and global production networks, distributional outcomes are heavily influenced by the governance strategies of the state, and the role of the state in distributive governance is shaped in part by its role in facilitative and regulatory governance. State strategies involving distributive outcomes involve mechanisms such as social policy, tax policy, labour law or labour mobility regulation. The allocation of rents or benefits among different participants in the value chain is a key point of distributive governance.

The Czech Republic, as a Central and Eastern European country, has been seeking strategies to adapt to globalisation after its transition to the free market. After 1990, the Czech automotive industry started to participate in GVCs. As the integration of the automotive industry into GVCs deepened over time, the Czech automotive industry became more integrated into the distribution pattern of GVCs. Following the introduction of market economy reforms in 1990, the government pursued a series of liberalisation and incentive policies, and like regulatory governance, the state outsourced its distributional role through tax incentives, labour market flexibilisation and other investment promotion measures. As the state reduced its regulatory role in the labour market, employment trends shifted from monolithic, full-time to irregular, time-limited and flexible patterns, and jobs became more precarious in terms of job security, remuneration and working conditions. The Czech automotive sector received a large amount of foreign investment at the beginning of the reform period due to the cheap and high-quality labour force, but relying on this advantage to enter the global automotive market resulted in unstable employment and hindered the further upgrading of the Czech automotive industry, and put a lot of pressure on the costs of the Czech automotive industry due to the disadvantageous position in the strategic coupling with foreign companies, and the cheap labour force remains one of the most important advantages for the development of the Czech automotive industry. One of the most important advantages for the development of the automotive industry, which severely limits the bargaining power and the level of protection of the Czech workforce especially the rise of wages in the components sector. Foreign investment has brought about a long period of low unemployment and job growth in the automotive industry employment has led to insufficient

government attention to employment in the automotive sector. In some regions of the Czech Republic, the average wage in the automotive sector is well below the average advantage or even below the minimum wage. Although the state has introduced active labour policies to protect employment, including incentives for investors to create new jobs in the manufacturing sector, retraining of unemployed workers, and increased investment in vocational training, the implementation of these labour policies has been plagued by a lack of financial resources.

Tax policy is an important way for the state to engage in the governance of the distribution of GVCs, but due to the state's long-standing public policy of attracting foreign investment through tax breaks for the automotive industry, as cited in the example of promotional governance regarding Skoda, Hyundai and Toyota, the government has provided many tax incentives for almost every large automotive multinational entering the Czech Republic, which has affected the Czech Republic's ability to redistribute value in the GVCs. distribution in the global value chain, with many large foreign-owned automotive companies more likely to profit from the government's promotional policies, thus reducing the state's ability to govern the redistribution of value created by the automotive industry in the Czech Republic. While the automotive industry is also under coercion from powerful multinational dominant firms, all of these decisions made by the state to attract and retain investment can be seen as part of the state's choices.

As described in the previous section on the position of the Czech automotive industry in GVCs, the Czech Republic, although an emerging region in global automotive production, is still marginal and peripheral to the regional value chains of Western Europe with Germany at its core, and large multinational automotive firms have played a key role in the transformation and reintegration of the Czech automotive industry into GVCs after 1990 through their investment in the Czech automotive industry after the Czech transition. Large multinational automotive companies have played a key role in the transformation of the Czech automotive industry after 1990 and its reintegration into global value chains, and have deepened their influence in the Czech automotive industry in the process of its transformation, which is export-oriented and highly dependent on foreign investment, and multinational automotive companies have strengthened their dominant position in Czech automotive companies as the Czech automotive industry's participation in the global value

chain has deepened. The Czech automotive industry has become more and more dependent on foreign investment. Disadvantageous position in the strategic coupling of global automotive production networks also reduces the state's 'policy space' in distributional governance, as dominant foreign companies want to locate production where they have the flexibility of labour paths and the least distributional responsibilities, they demand exemptions and compensations from social obligations in investment negotiations and seek to send the most value added back to the home country, whereas the Czech economy has a strong dependence on foreign investment. The dependence of the Czech economy on the automotive industry and its dependence on the lead firms has limited the state's involvement in distributional governance in order to satisfy the demands of the lead firms, and the state has "outsourced" the distributional role to the lead firms in order to obtain continued investment from the foreign-owned lead firms. Of the total number of employees in the Czech automotive industry, many more are employed in the production of automotive parts and components than in the production of vehicles. As an important part of the Czech automotive industry, the production of automotive components is highly standardised and labour-intensive, but the added value of the production is low. Large multinational automotive companies use their dominant position to exert strong commercial pressure on Czech automotive companies regarding prices and supply conditions. This commercial pressure requires Czech suppliers of automotive components to continuously reduce costs and improve the quality of their products, which results in a significant amount of domestic value added from the Czech automotive industry being shipped to developed countries.

Bringing the three dimensions of state governance to the development of the Czech automotive industry in the GVC in the post-communist period, it can be seen that the state played an important role in the transformation of the Czech automotive sector and its integration into and upgrading of global value chains. The state facilitated the proliferation of unstable automotive GVCs in the Czech Republic led by foreign dominant firms, making the Czech Republic a peripheral market for integration. On the one hand, state promotion policies played a key role in the rapid progress of the automotive industry in the underdeveloped 'emerging' economies from the early 1990s onwards, and active policies to attract foreign investment and neoliberal reforms led to the rapid rebuilding of the Czech automotive industry after 1990, which has become an important driver of the Czech economy and its participation in the global economy. The automotive industry has become an important driver of Czech economic development and one of the sectors with the deepest participation in GVCs, and the Czech Republic has become an important emerging country in automotive production. On the other hand, however, the inherent characteristics of GVC inequality have brought about tensions between state-promoted and non-promoted governance, as well as between private and public governance. Driven by the pursuit of a neo-liberal agenda and the desire to attract more foreign investment, the government has chosen to actively outsource the role of regulator and distributor to the dominant automotive firms, limiting the effectiveness of the regulatory and distributional policies available to the state, which may, to some extent, limit the acquisition of more domestic value-added in the Czech automotive industry and constrain further upgrading of the automotive industry.

Discussion

In reviewing the literature, based on the study by Mayer (2017) and Horner (2017) in which have suggested that there is a role for the state to play in the governance of global value chains, an initial objective of the project was to attempt this analytical framework in this article to analyse how the dynamics of state governance play a role in the specific context of the post-communist Czech automotive industry. This study set out with the aim of assessing how Czech public policies and state governance towards the automotive industry after 1990 have affected the transformation of the Czech automotive industry and its participation in GVCs, as well as its position and size in the value chain. This work found that as the most important role of the state after the economic transition, the promotional governance of the Czech automotive took the conventional approach of attracting foreign investment by building a free market and providing incentives for foreign investment, and through the promotional policies, the state's proactive participation shaped the position of the Czech automotive industry in the global automotive value chain after 1990, which was rapidly transformed and developed. The Czech automotive industry has undergone rapid transformation and development since 1990, with large foreign investments becoming the main driving force behind the rapid transformation of the automotive industry. The dynamics of the state's regulatory and distributive governance are more complex. On the one hand, the state's role in GVC management needs to be assessed and adjusted according to the specific situation, as different political parties have different attitudes towards the role of the state in the economy, leading to differences in regulatory governance in different periods. In each period, the state has not completely withdrawn from the automotive industry altogether, on the contrary, the state actively participated in the transformation and privatisation process of the automotive industry, on other hand, under the influence of neo-liberalism and similar to Mayer (2017), after 1990, the Czech government gradually outsourced more and more of its regulatory functions to private actors to take over the role, especially in terms of labour and environmental protection. The Czech government has been able to achieve comprehensive deregulation of the labour market. But this "outsourcing" of regulation was not passive; becoming a low-cost point in global value chains to attract foreign investment led the state to actively outsource the role of regulator in order to compete with other countries in Central and Eastern Europe for more investment.

The importance of the facilitator's role and the "outsourcing" of the regulator's role together shaped the dynamics of the Czech automotive industry in GVCs after 1990. The free market and the facilitation policy of the government after the economic reforms attracted many multinationals to invest in the Czech Republic, which, on the one hand, facilitated the rapid transformation and development of the Czech automotive industry. On the one hand, this has facilitated the rapid transformation and development of the Czech automotive industry, which has successfully become an emerging automotive producer and integrated into the global automotive production network, and the automotive industry has become one of the most highly integrated industries in the Czech Republic into the global value chain. On the other hand, however, due to the outsourcing of the role of "regulator" by the state, large automotive multinationals have dominated the Czech automotive industry, and the export-oriented characteristics and dependence on foreign investment have hindered the continuous upgrading of the Czech automotive industry in GVCs, and the Czech Republic is still on the fringe of the GVCs, and cheap labour will continue to be the main factor for the development of the automotive industry. The Czech Republic is still on the edge of the global value chain, and cheap labour will continue to be the main advantage for the development of the automotive industry.

Position in the value chain determines position in distribution, and the economic logic of GVCs determines the distributional pattern of GVCs (Mayer (2017)), as part of trade adjustment and free trade agreements, and like the role of the regulator, the state has been 'outsourcing' its role in distributive governance, the The paradox of the state's role in promotional and regulatory governance determines the pattern of distributive governance, and the reliance on foreign investment and outsourcing of the regulatory governance role has limited the state's ability to participate in the redistribution of GVCs. Out of the logic of the economics inherent in cost-cutting GVCs, dominant multinationals will continue to put commercial pressure on Czech automotive producers, which will somewhat limit the ability of the Czech automotive industry to capture added value.

The Czech automotive industry's participation in GVCs in the post-communist period the state to some extent justifies the findings of Mayer (2017) and Matthew Alford & Nicola Phillips (2017), which is not a stale point of view, as it is clear from my analysis that it can be observed that the state and public power still make the GVC governance an important form, far from being a passive recipient of GVCs, the state on the contrary actively

participates in the process of GVC governance, playing the roles of facilitator, regulator and distributor. Neither public nor private governance can shape GVCs independently, and how to achieve a dynamic balance between them is the key to achieving sustainable and equitable GVCs.

The most important limitation lies in the fact that I have only focused on the role and impact of the Czech automotive industry in GVCs and have not studied other industries in depth. Because the study is about the role of public governance, which is covered by both concepts, I did not make a careful distinction between the concepts of GVCs and GPNs in my study, but in fact, the two concepts have different emphases. In addition, our study is mainly based on a comprehensive analysis of the literature and lacks the support of empirical data, and I have mainly used secondary materials and data without primary data.

According to the results of my study, the next steps that can be taken include: 1. In-depth research on the role of the government in the governance of GVCs, exploring how the state should balance the promotion of industrial development and the maintenance of market competition. 2. Comparative research on GVCs in different industries and different countries in the Czech Republic, exploring the government's roles and impacts in different situations. 3. Research on the government's co-operation and competition, and to explore how governments can reconcile domestic and international interests to change the country's position and size in GVCs. 4. How should the balance between private and public governance be struck in the context of globalisation, and in my next research, I will also try to get some primary data and interviews to improve the persuasiveness of the evidence.

Conclusion

The aim of the present research was to examine the role of the state in the Czech automotive industry's participation in GVCs in the post-communist period, and to gain a better understanding of the role of facilitator, regulator and distributor of state governance in the Czech automotive industry's participation in GVCs. I try to answer the following questions: what is the role of the state in GVC governance? How the three roles of state governance work in the context of the characteristics of the Czech automotive industry production in the Czech Republic after 1990, and to think critically about whether state governance has contributed to the marginal position of Czech automotive firms in global automotive value chains.

The results of this study show that despite the realisation of neo-liberal economic reforms in the Czech Republic after 1990, public policies, especially promotional policies to attract foreign investment, continued to play an important role in the turnaround of the Czech automotive industry and its participation in global value chains. The "outsourcing" of regulatory and distributive governance of the state is also the result of an active choice of the state, and public facilitation of GVCs has been absorbed into the agendas of the Czech government and international organisations in which the Czech Republic participates. However, due to the unfavourable position in the strategic coupling, the contradiction between the state's facilitative and regulatory governance, as well as between public and private governance, has resulted in the state's limitations in distributive governance. The high dependence on foreign investment and exports put the Czech automotive industry at a disadvantage in the distribution of global value chains, with the state offering substantial incentives to retain MNCs' investments, and restrictions in regulatory and distributive governance, with large MNCs taking advantage of their dominant position to practice regulatory arbitrage, which affects domestic value-added capture and sustained upgrading of the automotive industry.

This work contributes to existing knowledge of the development of the Czech automotive industry in the post-communist period by providing some evidence of the key role of state governance in the Czech automotive industry's participation in GVCs, provides an alternative direction for researching the Czech automotive industry's sustainable development in GVCs other than focusing on multinationals and foreign investment, and

provides some reference for understanding the role of government in GVC governance. Having demonstrated the proactive nature of the state's participation in the GVC governance process, further exploration needs to be done to establish how to leverage the state's governance capacity into the pursuit of more equitable and sustainable development of the Czech automotive industry in GVCs without abandoning effective private governance or returning to the traditional statist model, and without preserving free competition in the global marketplace, will be the next step in the research.

In conclusion, the role of the government in GVC governance is a complex issue that requires a comprehensive consideration of various factors such as government, business and market. These findings suggest several courses of action for in-depth the role and impact of government in GVC governance, so as to provide a more scientific basis for governments to formulate industrial policies and participate in GVC governance.

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