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A stylized illustration of a mountain range with snow-capped peaks and dark blue slopes. The foreground features a red and white wavy pattern, possibly representing a river or a field. A large white circle is centered over the mountains, containing the text 'ENTREPRENEURSHIP AND GLOBAL ECONOMIC GROWTH'.

ENTREPRENEURSHIP
AND GLOBAL
ECONOMIC GROWTH

MODELING
ECONOMIC
GROWTH IN
CONTEMPORARY
SLOVAKIA

Modeling Economic Growth in Contemporary Slovakia

ENTREPRENEURSHIP AND GLOBAL ECONOMIC GROWTH

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Modeling Economic Growth in Contemporary Slovakia

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INVESTOR IN PEOPLE

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Preface

Ingrid Brocková

Ministry of Foreign and European Affairs of the Slovak Republic

Slovakia is a successful story of the economic transition and integration into the transatlantic security and economic structures. The year 2024 is the year of commemoration of the 31st anniversary of establishing an independent state, 20 years of membership in the European Union (EU) and NATO, and 15 years in the Eurozone. The integration process was the anchor and accelerator of the economy's transition. It meant a long-term effort and required a whole-of-government approach. Membership in the European Union and Eurozone has become a key policy framework for Slovakia's economic policy; encoring Slovakia in the system of other international organizations has become a tool for the prevention of populism.

After an ambitious reform agenda (1999–2006), Slovakia deservedly earned a reputation as the leading reformer in Central Europe, as the Slovak economy became the fastest growing in the European Union. Comprehensive and significant changes in public policy enabled the country to achieve a qualitative turn-around in its international status: it gained membership in the OECD, NATO, and European Union, acquired one of the top credit ratings among transition economies, and attracted an increasing share of foreign investments. In January 2009, this success was emphasized when Slovakia joined the Eurozone.

The Slovak authorities established a solid track record of economic adjustment and broad-based reforms. As a matter of priority, Slovakia had to address fundamental systemic problems, particularly related to the transparency and effectiveness of financial flows in almost all sectors and to the building of institutional capacity. The robust driver of the economic changes was the accession to the OECD and European Union, complemented by the World Bank programs such as improving the stability and efficiency of the banking and enterprise sector, social benefits administration, provision of social services, public finance management, and the performance of the health care system. In the context of accession, this involved mainly advisory activities that played a vital role. In 2002, for example, the World Bank conducted a comprehensive economic review focusing on Slovakia's readiness for EU accession (Development Policy Review) as well as a key document on agriculture (Food and Agriculture in the Slovak Republic: the Challenge of EU Accession, published in 2003). Both documents

recommended how to proceed in the accession process to maximize the benefits and minimize the costs related to the EU accession. The World Bank portfolio in the Slovak Republic had never been large in terms of the number of loans. However, in a few years, it succeeded in becoming quite diverse and substantive when it comes to the advisory role of the government.

The EU became the key policy framework for Slovakia's economic policy. Membership in the EU means the privilege and responsibility: the privilege to participate in many of the EU policymaking institutions, policymaking process, and to take full advantage of the resources that became available from the EU itself and to use those resources well to address the development challenges (especially well-equipped administrative structures and skills). Membership means responsibility for implementing EU legislation. Slovakia, being already a member of the EU, needed to build capacities that would allow Slovakia to fully benefit from the EU membership. That meant capacities to facilitate knowledge and expertise sharing, conducting analytical work, and evidence-based decision-making processes. At that time, Slovakia was facing three broad development challenges: (i) to continue the prudent management of the economy; (ii) to converge to European income levels and be competitive on the European and world markets; (iii) to reduce poverty and unemployment, and to address the problems of marginalized groups of the population, especially Roma community.

What was important after accession to the EU was maintaining the reform dynamism. In Slovakia, the spirit of reform and a new way of looking at economic and social challenges prevailed. During the initial process of acceding to the OECD and the EU, the requirements for successful accession heavily influenced the reform agenda in Slovakia. The reform process has been so well internalized and successful that Slovakia addressed problems in some areas by applying the best practices from the OECD and non-EU countries. Slovakia has introduced far-reaching economic systemic changes, often beyond the EU requirements: social security networks and pension systems were overhauled, the share of agriculture in GDP dramatically decreased, the business climate improved, the labor market was not overregulated, and the tax burden was relatively low. Managing economic policies meant converging to the EU and OECD levels as quickly as possible. The essential prerequisites for success were political leadership, commitment, and government ownership of the reform agenda. That was the so-called "Tatra Tiger" period.

Slovakia has made commendable progress, aiming to meet the Maastricht criteria to join the Eurozone in January 2009. The priority of the government then was to focus (i) on the quality and sustainability of growth (increasing employment and competitiveness), (ii) on protecting social cohesion and reducing poverty, and (iii) on strengthening public administration and capacities for the efficient utilization of the EU funds. Many challenges, such as investment in infrastructure, health care, and education, persist still today. The priority of the medium-term horizon is to ensure labor productivity growth to foster an efficient and competitive business environment to sustain the economic growth necessary to accelerate convergence. That means keeping the reform dynamics in the country.

Slovakia needs a new economic model. Slovakia's dynamic growth has depended mainly on export-oriented manufacturing and foreign direct investments; located largely in western Slovakia, the central and eastern parts of the country are lagging. Slovakia benefits from strong links with the world economy, especially the EU members. However, international trade tensions and volatility pose risks to Slovakia's open, export-oriented economy. To a greater extent, the Slovak economy's vulnerability is higher than most other OECD countries. Slovak production focuses mainly on low-value-added downstream activities. Strong productivity growth has arisen from joining global value chains, mainly in labor-intensive segments such as car assembly. Large foreign investment inflows have helped develop a competitive export-led manufacturing industry, with a strong specialization in the automotive and electronics sectors, fostering robust growth and productivity performance. To sustain economic progress, Slovakia will have to move beyond this approach. Low research and development expenditures limit productivity growth going forward. Sustaining past productivity improvements, primarily based on integration into global value chains, will require strengthening Slovakia's capacity to innovate and adopt new technologies. The quality of the academic research system must be improved, and collaboration with companies' R&D must be expanded.

The local value-added content of exports is relatively low, and skills shortages may deter future investment. Foreign investors have already asked for additional immigration to ease the supply of skilled workers. Success has been based on a narrow range of industries. Smaller or domestically owned firms, especially in services, have not benefited from spillovers, needing access to financial sources to innovate and develop, thus falling further behind in international productivity comparisons. Slovakia must invest in skills and adaptability to labor market developments, as the risk of automation is more acute than elsewhere. It also needs to develop its capacity to innovate and adopt new technologies.

The transition to a greener economy, supported by international environmental commitments and national policies, will entail structural changes in consumption patterns and industry structures and offer new drivers for potential growth. Slovakia will need to build a practical framework for green growth to maximize the exploitation of cleaner sources of growth and seize the opportunities to develop new green industries, jobs, and technologies. This requires addressing environmental externalities by extending environmental taxation and removing subsidies, together with improving the economy's adaptive capacities through eco-innovation.

The main priorities are to restore public finances while fostering domestic growth drivers and ensuring the funding of items to promote growth, such as education and active labor market policies. Educational outcomes have declined throughout the years in Slovakia, and the education system does not do a good enough job of preparing students for the labor market. At the same time, many young, talented Slovaks are studying and working abroad. Improving educational outcomes and investing in skills should be a priority. The decline in educational performance must be reversed, and more must be done to improve the chances of children from poorer backgrounds. Early childhood education and better trained

and paid teachers are necessary for this transformation. Good vocational education is essential for improving the skills needed in the labor market.

Population aging in Slovakia, projected to be one of the sharpest in the OECD, will pose a long-term challenge for fiscal policy and higher living standards. As the old-age dependency ratio rises steeply in the longer term, fiscal pressure intensifies. In this respect, the parameters of the pension system would be essential. Reinforcing spending reviews and better integrating the results into medium-term budget planning could help increase efficiency and release funds for priorities such as education and social inclusion.

Slovakia has traditionally been a country with significant regional disparities. Regional inequality is among the highest in the OECD; not everyone has benefited equally from growth. Long-term unemployment remains prevalent in the east and some central regions. The socioeconomic situation of the Roma calls for urgent policy action. Skills shortages in the Bratislava region persist alongside skills mismatches and uneven availability of technological and human resources in the central and eastern regions. Inadequate transport infrastructure raises costs for those who might establish firms in the lagging regions. The mobility of low-skilled unemployed is hampered by the lack of affordable housing where the jobs are and the lack of prioritization of active labor market policies. At the same time, regional job creation is often hindered by the weak response of local labor costs to local labor market outcomes. The school-to-work transition is weak, and vocational education does not provide adequate skills, one of the main barriers to regional development. Unequal educational opportunities, particularly for the Roma population, also hold back inclusive growth. Most of the Roma (who make up around 8%–10% of the population) live in poverty and face social exclusion in most aspects of everyday life. Most suffer from long spells of unemployment and low life expectancy. The Roma needs better access to education, health, employment, and other public services. More live in isolated or segregated communities and have low educational levels and high school dropout rates. Although public services are available in principle, language barriers, a lack of awareness of available programs, and discrimination hamper access.

Slovakia is generally underperforming in terms of public sector efficiency, which reduces the room for maneuvering for fiscal consolidation and financing growth-friendly measures. The public sector lags on the application of e-government and e-procurement. Practiced human resource management has resulted in a high staff turnover. The regulatory framework and judicial system remain insufficiently supportive of business activity, and perceived corruption impedes growth. The efficiency of public spending and the absorption of EU funds suffer from a lack of systematic evaluation and coordination between ministries, cumbersome procedures, and weak administrative capacity. Public–private partnerships had to be canceled because of nontransparent procedures and high financing costs. Strong centralization has weakened the incentives for efficiency at the subnational level, and many municipalities are too small to provide public services efficiently.

Deploying reliable digital infrastructure and enhancing digital government services is critical to enabling digital transformation across the economy and society. Further improving the business environment can foster business dynamism. Despite progress in reducing administrative burdens, regulations in several areas, especially

for start-up firms, remain more restrictive than in other EU countries. Continuing judiciary reforms are needed to fight corruption and foster efficiency and trust. Given the deterioration of public finances, there is little scope for higher spending without reprioritization. In such a situation, raising public sector efficiency can free up resources and help to stimulate productivity and, thus, potential growth.

Each government sets up an ambitious reform program, emphasizing reforms and investment in education, health care, and a greener economy and innovation. Further efforts are needed to raise Slovakia's chronically low absorption rate of EU funds by streamlining public procurement and enhancing public investment governance.

Historically, based mainly on integration into global value chains, sustaining productivity gains has been essential to revive economic convergence and boost living standards in Slovakia's aging society. It requires strengthening Slovakia's capacity to innovate and adopt new technologies also implementing necessary systemic measures such as:

- Building national capacity for strategic foresight to identify megatrends and their impact on vulnerability to external and internal shocks, thus building the resilience of the Slovak society.
- Slovakia needs a new economic model to ensure prosperity and competitiveness by addressing connectivity, education quality, the economy's structure (with the dominance of small- and medium-sized companies), and innovation capacity.
- Public administration needs to improve analytical capacity, evidence-based policymaking, and the ability to learn and be inspired by the good practices of other countries, especially in allocating available EU funds. That calls for a more efficient institutional structure, governance, and integrity of the public sector.
- Vision, political commitment, and stability. Slovakia is a country without continuity; what has been evident is sectors where changes require a more extended period than one election cycle. The country's vision is the fundamental prerequisite to spending wisely on EU funds to accelerate Slovakia's development challenges. Inclusive, sustainable, and green growth will not be achieved without the engagement and partnership of the private, public sector, and academic communities. Slovakia needs a whole-of-society approach.

I am convinced that the presented publication and its authors accurately reflect the state of play of the Slovak economy and outline recommendations on how to address the current challenges and create a new economic model for ensuring better prosperity in Slovakia.

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Introduction

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The story of Slovakia's economic journey over the past three decades is about how the country has undergone a remarkable transformation in its economic landscape. Emerging from the shadows of state socialism and the centrally planned economy, Slovakia embarked on a path of economic transition and reforms. The dissolution of Czechoslovakia marked the beginning of a new era for Slovakia, characterized by the need to establish its own economic policy, institutions, and legal frameworks. In the tumultuous years of the 1990s, the country faced numerous obstacles on its path to economic stability and growth. Through perseverance and strategic reforms, Slovakia emerged as a dynamic market economy with a strong export orientation and has been walking this path for over 30 years. However, the current economic model of Slovakia raises several concerns, particularly in light of global challenges, trends, and the necessity for transformation in order to increase economy's competitiveness and ensure its future economic growth.

The book *Modeling Economic Growth in Contemporary Slovakia* delves deep into the intricacies of Slovakia's economic trajectory, offering invaluable insights for policymakers, academics, and practitioners alike. Through a comprehensive analysis, the authors unravel the multifaceted factors that have shaped Slovakia's economic path, ranging from economic policies and institutional structures to trade dynamics, innovations, and external influences. The chapters of this book also identify some policy implications that might be useful in predicting the future trajectories of Slovakia's economic growth and development.

Chapter 1 discusses the economic challenges faced by Czechoslovakia after 1989 during its transition from a centrally planned system to a market economy. It focuses on the liberalization of prices and foreign trade, as well as small and large-scale privatization initiatives. Despite initial setbacks, the chapter highlights the successful transformation before the peaceful division of Czechoslovakia into the Czech Republic and Slovak Republic in 1993. The author explores the institutional and legal frameworks established by Slovak authorities and the economic pressures faced.

Chapter 2 examines Slovakia's economic transition since 1993. It analyzes pivotal reforms, political choices, and contextual elements impacting the country's economic path. The authors state that, despite growth, Slovakia faces challenges from oligarchic influence, socioeconomic disparities, over-reliance on the automotive sector, and insufficient investment in innovation and infrastructure. The chapter stresses the need for visionary leadership and a national discourse on Slovakia's future trajectory.

Chapter 3 discusses Slovakia's economic convergence within the global and European contexts. It analyzes Slovakia's progress against peers within the Visegrad Group and other new EU Member States using various metrics, such as Global Competitiveness Index, Ease of Doing Business, and GDP per capita. The chapter explores the factors driving these shifts and offers insights into the evolution of the Slovak economy.

Chapter 4 examines economic growth as the primary policy framework in Slovakia and explores alternative approaches that prioritize human welfare and environmental considerations. It analyzes indicators such as the Human Development Index (HDI) and the Planetary Pressures-adjusted Human Development Index (PHDI) to assess quality of life and environmental sustainability. The chapter questions the viability of growth-centric policies amid climate change challenges and the EU Green Deal, emphasizing the need for greater integration of sustainability principles in Slovakian policymaking. It concludes by identifying specific areas where insights from critical perspectives can inform policy decisions in Slovakia.

Chapter 5 discusses Slovakia's labor market dynamics from 2000 to 2020, which played a crucial role in accommodating the significant social and economic transformations during this period. The chapter provides insights into the status of the labor market, including unemployment rates and workforce composition. It examines the determinants of labor market changes and their interactions with the external environment.

Chapter 6 analyzes the real estate market in Slovakia, focusing on developments since 1990. It assesses factors influencing this market, including social, economic, and financial determinants. The chapter explores the impact of owner-occupied housing on housing issues and investigates ownership trends, particularly in Bratislava. It also examines the influence of financial indicators such as interest rates, housing loan availability, and banking sector regulations on residential real estate prices, determinants, and market risks in Slovakia.

Chapter 7 focuses on the Slovak Republic's external economic relations, namely its performance in foreign trade and foreign direct investment (FDI) flows, as well as the country's foreign economic policy and institutional framework in the field of export and investment promotion. The chapter points out that Slovakia is highly integrated into global value chains, but it mostly focuses on economic activities with a low domestic added value. Given that Slovakia is strongly dependent on exports and FDI inflows, the country should improve the effectiveness of its foreign economic policy, diversify the territorial and commodity structure of exports, support outward FDI flows, as well as attract FDI with higher added value and to less developed regions in order to increase

international competitiveness and ensure future economic development of the Slovak economy.

Chapter 8 delves into the issue of regional inequalities in Slovakia. It explores the topic through a historical lens and draws comparisons between selected indicators and those of other areas within the European Union. The chapter highlights the negative impact that centralized governance structures in Slovakia have had on a regional welfare, resulting in weaker economic performance and labor market outcomes. Additionally, the text analyzes the effectiveness of financial transfers that have been put in place to address regional disparities. The chapter concludes with a set of public policy recommendations.

Chapter 9 discusses Slovakia's unique growth model and aims to explain the apparent differences through the politics of growth model approach. In the early 2000s, Slovakia implemented avant-garde neoliberal policies to outbid regional competitors in attracting FDI. Its growth model's strength lies in the interaction between a cross-class domestic growth coalition, meeting the needs of transnational manufacturing capital, and external constraints, like membership in the EMU.

Chapter 10 delves into Slovakia's automotive industry, which heavily relies on foreign capital. The industry faces an uncertain future due to digitalization and car electrification. The Slovak government seeks new foreign investments in battery production and a fifth car manufacturer. However, this strategy may affect long-term progress and innovation.

Chapter 11 focuses on innovation in Slovakia and its role in driving sustainable development and competitiveness. The chapter highlights the need for investment in research, development, and innovation from both private and public sectors. It also emphasizes the importance of digitalization and collaboration among stakeholders to foster a knowledge society. Lastly, it discusses the imperative of digital transformation for Slovakia to successfully adapt to ongoing changes.

Chapter 13 discusses Business Service Centers (BSCs) in the Slovak economy. These centers employ around 40,000 skilled workers and drive service export growth. The BSCs are expanding beyond Bratislava to cities like Košice, particularly in IT outsourcing. Government support is needed to secure a skilled workforce as the industry prepares for process automation.

Chapter 13 highlights the significance of tourism and culture industries in the Slovak economy and it also points out that Slovakia has an unexploited potential in this field that may be used for future economic development. The contribution of the cultural and creative industries to GDP has grown over the last 20 years, not only in the European Union but also in Slovakia. Therefore, culture and tourism play an increasingly vital role in the development of Slovakia's regions.

Chapter 14 compares the Czech and Slovak economies before and after joining the EU, focusing on the effects of EU membership and Slovakia's adoption of the euro on their economic trajectories. The aim of the chapter is to identify whether the two economies closely resemble each other or represent unique economic evolution cases. The authors investigate the behavior of the two economies throughout the transformation period.

The book paints a comprehensive picture of Slovakia's economic evolution through chapters delving into economic reforms, labor market dynamics, regional inequalities, innovation, external economic relations, and industry-specific analyses. It underscores the successes, challenges, and areas for improvement, particularly in the face of global trends and sustainability imperatives. *Modeling Economic Growth in Contemporary Slovakia* is a unique attempt to reflect the specific case of the Slovak economy. We believe this book represents a valuable addition to the existing book series *Entrepreneurship and Global Economic Growth*, focusing on another economy from the Central and Eastern European region.

I

Dynamics of the Slovak Economy

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Chapter 1

Historical Development of the Czechoslovak and Slovak Economies in the Transition Period

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Abstract

After 1989, the Czechoslovak economy faced very many challenges related to the transition process from centrally planned system to the market economy. The main goal of the transformation was the liberalization of prices and foreign trade. After the price and trade liberalization has been introduced a critical part of transformation, including the small and large scale of privatization. The price and foreign trade liberalization, including the small and large privatization, had very negative impact on the economic activities. After relatively successful transformation, the authorities from both the Czech and the Slovak Republic decided on a peaceful division on separate of two republics, the Czech and Slovak republics since January 1st, 1993. Historically, the main institutions during the Czechoslovak republic were located in the Czech Republic, in particular, central banks and other federal institutions. In addition, the structure of the Slovak economy was relatively less developed in comparison with the Czech economy. The Slovak authorities were able to build the institutional and legal frameworks for the Slovak economy. During 1993, the Slovak economy was under many pressures due to the relatively low level of the foreign exchange assets, deep external imbalances, and high level in inflation. Furthermore, it was needed the restructuring of the enterprises, dealing with bad debt in the banking sector etc. Despite all obstacles related to the overall transformation process, including the creation of new

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institutions for a new country, the Slovak economy started to adjust to new market economic conditions relatively well.

Keywords: Transformation process; centrally planned system; market economy; liberalization of trade; deregulation of prices; privatization

1. Introduction

The goal of this chapter is to evaluate the historical development of the Czechoslovak and, subsequently, Slovak economy during the period from 1989 to 1993. After November 1989, the transformation process from a centrally planned system to a market economy began in the joint state of Czechs and Slovaks. A characteristic feature of this period was that the transformation process proceeded relatively quickly, primarily focusing on macroeconomic stability, price, and foreign trade liberalization. As the next stage in this transition process to a market economy, an extensive privatization of state property ensued.

From a macroeconomic perspective, creating conditions to ensure stability was necessary. Extensive changes were made in the fiscal area, both in the structure of public finances and in the introduction of transparency in public finances. In the monetary policy and exchange rate area, a series of measures were adopted to ensure the stability of price development and the exchange rate. Due to the extensive process of price deregulation, a relatively high level of uncertainty was observed during this period. The process of price liberalization led to a significant increase in the inflation rate.

The transformation process led to a gradual shift in foreign trade orientation from former member states of the Council for Mutual Economic Assistance (CMEA) to other European countries, especially industrially developed states and neighboring countries.

The change in orientation in foreign trade relationships and a decline in foreign exchange reserves prompted the former government to request additional financial resources from international monetary and financial institutions to ensure macroeconomic stability and an unprecedented adaptation to the newly emerging conditions.

Due to the radical transformation process, there was a noticeable lack of capital investments during this period. An analysis of the relationships in former Czechoslovakia is necessary to understand the developments in this period better.

Parts of this chapter have been published in the Slovak language in the section: Vývoj ekonomiky po roku 1989 [Development of the economy after 1989] (Sipko, 2021) of the monograph: Cesta Slovenska k vzniku samostatného štátu v roku 1993 [Slovakia's path to the creation of an independent state in 1993].

2. Economic Development in Former Czechoslovakia

During the interwar period, the Czechoslovak economy belonged to one of the leading developed economies in the global economic landscape. Industrial production with a relatively higher value added compared to some European states was predominant in the Czechoslovak economy (IMF, 1990). Therefore, the well-functioning economy enjoyed relatively high prosperity during this period.