Regional inequalities in Serbia, among the highest in Europe, have widened over the past two decades.

A more balanced Regional development policies based on subsidies have had little effect in reducing regional disparities as the subsidies have not been effectively targeted on firms in the least developed regions, while local self-governments have not been recognised as key stakeholders in the formulation and implementation of local economic development policy.

A more balanced regional development in Serbia would ease the pressures for rural-urban migration, reduce the decline in labour-force participation in less developed regions, create new job opportunities for young people, and reduce the concentration of political power in the largest urban centres enabling a greater democratic participation of citizens.
REGIONAL DISPARITIES AND REGIONAL DEVELOPMENT POLICIES IN SERBIA
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Introduction

Serbia has wide regional disparities in GDP per capita that are among the largest in Europe. The two regions located in the north of the country (Belgrade and Vojvodina) provide more than two thirds of the country’s GDP; the Belgrade region provides 42% of GDP and the Vojvodina region provides 27%, indicating the persistence of a substantial gap in development and productive capacity between Northern and Southern Serbia. The other two regions - Šumadija & Western Serbia, and Southern & Eastern Serbia - contribute the other third of Serbia’s GDP. Given that the four regions have roughly similar populations, the resulting gap in regional GDP per capita is huge. The ratio of Gross Value Added per capita of the poorest Serbian district (Jašanica) and the richest (Belgrade) is 1 to 3.7. These differences in economic development have been extensively studied by Serbian researchers (Miljanović et al. 2010; Maniæ et al. 2012; Jakopin, 2014; Joksimoviæ & Goliæ). There are also wide differences in levels of educational attainment (Jokiaæ et al. 2015), business conditions (Jakopin, 2015; Saviaæ et al., 2015; Maniæ et al., 2017), labour market conditions (Arandarenko & Joviæ, 2007; Kostadinoviæ & Stankoviæ 2020; Arandarenko et al., 2021), efficiency in the provision of public services (Radonjiæ, 2020; Maniæ & Mitrovæ 2021) and innovation and R&D spending (Saviaæ et al., 2015). Rural areas are becoming depopulated even in the more developed regions of Vojvodina, as many villages are abandoned (or becoming so) due to a lack of local development and employment opportunities (Obradoviæ & Matoviæ).

Achieving a more widespread and balanced economic development in Serbia is important for both economic and political reasons. Firstly, for economic reasons, a more balanced regional development would reduce the pressures for rural-urban migration and diminish congestion in the main urban areas with its associated costs, while at the same time reduce the long-term decline in labour-force participation in less-developed regions and raise the national employment rate (lammarino et al., 2019). A more balanced economic development throughout the country could create new job opportunities for young people, thus reducing outward migration. These benefits could raise the overall productivity of the economy by ensuring that resources are more evenly allocated across the territory and reduce the social costs of geographical concentrated ageing communities and depopulation of left-behind areas. Against this is the argument that productivity is enhanced by the agglomeration economies of concentration of populations in large urban areas. However, the growth of the digital economy is reducing the force of these agglomeration economies and highlighting the increasing opportunities and economic benefits of remote working and improved quality of life that can be brought about by relocating workers to digitally connected small towns and rural areas.

Secondly, for political reasons, the reduction of regional inequalities would reduce the concentration of political power in the largest urban centres, especially Belgrade, and enable the greater democratic participation and wider expression of “voice” of citizens living outside the main urban areas. The economic regeneration of the left-behind areas will also assist in the maintenance of the liberal-democratic order and limit the appeal of reactionary populist political parties. Regional development is intrinsically linked to fiscal decentralisation arrangements for local self-governments. Initial reforms in Serbia brought some decentralisation of public policies, but more recently there has been a reversal towards greater centralisation that has not favoured local development or the efficient provision of public services at the local level (Kmeziæ & Duliæ).

Serbia as a country already negotiating European Union (EU) membership ought to be prepared for the future use of EU regional and cohesion funds. Once Serbia joins the EU, it will have access to substantial funding to help development of its less-developed regions. Without adequate administrative capacity and professional skills within local self-governments and institutions, there is a risk that the absorption of EU funds will remain low (Rikalovaæ et al., 2017).

The next Section 2 describes the territorial organisation and administrative division of powers in Serbia, as well as the main features of the government’s recent regional development policies. Section 3 analyses the current situation of economic disparities among Serbian regions and districts and discusses the main findings of recent research on regional development in Serbia. Section 4 looks into the relationship between structural change and regional disparities, identifying the different sectoral patterns of economic development in various parts of the country. The paper concludes with some proposals on how regional development could be implemented more effectively.

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1 The authors would like to thank Sonja Avlijaš and Mihail Arandarenko for useful comments, as well as Sanja Akseintjev and Mijana Stankovic from the Statistical Office of the Republic of Serbia for statistical clarifications.
2 REGIONALISATION AND REGIONAL DEVELOPMENT POLICIES IN SERBIA

2.1. TERRITORIAL AND ADMINISTRATIVE STRUCTURE

Concepts of regionalisation and regional development gained relevance in Serbia after the democratic turn in 2001, along with the process of decentralisation implemented from 2002 onwards under the Law on Local Self-Government. After Serbia signed a Stabilisation and Association Agreement with the EU in April 2008, the country was required to introduce statistical regions (NUTS) to facilitate reporting to the EU on socio-economic development at the sub-national level. The present division of the territory of Serbia was defined by the Regulation on Nomenclature of Statistical Territorial Units and the Law on Regional Development of 2009, which provides for the country’s regionalisation based on the NUTS classification (Government of Serbia, 2009a, 2009b).

Two main geographic regions have been defined at the NUTS 1 level: Northern Serbia and Southern Serbia (see Figure 1). Four statistical regions have been defined at the NUTS 2 level as the basis for planning and monitoring the policy of regional development: Belgrade, Vojvodina, Šumadija & Western Serbia, and Southern & Eastern Serbia. The NUTS 3 level represents the level of administrative districts (oblast). The region of Belgrade is classified as a single district, the region of Vojvodina has seven districts, Šumadija & Western Serbia has eight districts, while Southern & Eastern Serbia has nine districts. In total, there are 25 districts at the NUTS 3 level. It should be emphasised that these regions and districts lack any autonomous administrative functions, except for Belgrade, which has its own special status as simultaneously a region, district, and city.

Serbian authors have been critical of the establishment of NUTS 3 regions as statistical regions corresponding to existing administrative districts. These districts have no independent authority but administer the deconcentrated powers of central government at the local level (Golić & Joksimović, 2017). For example, the network of public employment offices that deliver local services for the National Employment Service are organised at the district level. Some authors have argued that the NUTS 2 regions should be given enhanced decentralised powers to administer funds for regional development, such as those that would be available in the future if Serbia were to join the EU (Mania et al., 2013). Below the level of the central government, the next lower level of decentralised decision-making power is the city and municipality level (effectively NUTS 4 – or in the EU nomenclature, Local Administrative Unit - LAU1). Altogether, there are 145 self-governing municipalities and 29 self-governing cities in Serbia. In contrast to their districts, each city is a decentralised unit of local self-government, with similar delegated powers to their surrounding municipalities. Some larger cities have their own city-municipalities.

A major problem is that the delegation of responsibilities to local authorities has often not been backed by adequate financial resources (Avlijaš & Bartlett, 2011; Kmezić & Dulić, 2018). Cross-sectoral coordination has been largely absent because the institutional setting has been intrinsically unstable and averse to cooperation, mostly for political reasons. Moreover, the intended outcomes of decentralisation, such as improved service delivery for the citizens and a better quality of life, have often failed to materialise in practice. This view is supported by Mania et al. (2021) who use data envelopment analysis to observe differences in efficiency of resource use among districts with the implication that many local self-governments do not make best use of the resources available to them. Kmezić & Dulić (2018) have also critically examined the outcomes of fiscal decentralisation reforms in Serbia since 2000. Although formally opting for decentralisation and adopting policy measures to implement it, Serbia reversed its course on decentralisation in the period following the global economic crisis of 2009. Over the past decade measures towards greater centralisation have hindered local development and the efficient provision of public services at the local level.
2.2. REGIONAL DEVELOPMENT POLICIES

In the 1990s and early 2000s, regional policy in Serbia had been focused entirely on the small number of most depressed municipalities, which failed to overcome the tendency of the market mechanism to increase regional inequalities (Miljanović et al., 2010). A decisive step was taken in 2007, when the Regional Development Strategy of the Republic of Serbia for the 2007-2012 period (Government of Serbia, 2007) was adopted, that introduced a broader vision of regional development. According to the Strategy, the state was to assist underdeveloped regions by increasing their capacity for autonomous development. The National Programme for EU Integration adopted in 2008 identified the reduction of regional disparities as a high national priority. In 2009, the Law on Regional Development (Government of Serbia, 2009b) was adopted, that stressed the importance of a comprehensive approach to regional development aimed at reducing regional and intra-regional socio-economic disparities. However, the law did not do much to change regional policy in Serbia, which remained focused on the classification of municipalities as more or less developed, with a more detailed system of classification. It also remained focused on the use of investment subsidies as the main instrument of regional and local development. The main innovation of the law was the creation of the NUTS system of territorial classification and the establishment of an administrative superstructure through which regional policy could be channelled and implemented. Under the law, local self-government units (municipalities and cities) were classified into four groups based on their level of development: (1) units above the national average; (2) units at 80-100% of the national average; (3) units at 60-80% of the national average; and (4) units under 60% of the national average. “Insufficiently developed units” of local self-government include the fourth of these groups, and units in which demographic decline since 1971 has exceeded 50%.

The Spatial Plan of the Republic of Serbia for the periods 2010–2014–2021, adopted in 2010, identified 36 underdeveloped local municipalities according to a set of defined characteristics, including natural fragility, relative isolation and inaccessibility, traditional mono-structured economy, long-term and continuing population decline, fragmentation of settlements, the occurrence of spontaneously displaced rural settlements, spatial-demographic inequality, and level of poverty (Drobnjaković et al., 2016).

The 2009 law established a new institutional and administrative framework for the development and implementation of regional policy. At state level, the National Council for Regional Development brings together Ministers responsible for the economy and regional development, finance, the environment and spatial planning, public administration and local self-government, labour and social policy and sustainable development of underdeveloped areas. The Serbian Development...
Regional Development Agency (Razvojna Agencija Srbije – RAS, in Serbia) has a network of 17 accredited Regional Development Agencies based in Subotica, Novi Sad, Zrenjanin, Pančevo, Ruma, Belgrade, Loznica, Požarevac, Kragujevac, Zaječar, Kraljevo, Užice, Kruševac, Novi Pazar, Niš, Leskovac and Vranje. At lower administrative levels there are Regional Development Councils, Regional Development Agencies, and Regional Associations. The Development Fund of the Republic of Serbia, through its credit policy, implements programmes of regional development. The Serbian Agency for Business Registers monitors and catalogues the subsidies granted for regional development. The financing of regional development projects is regulated through agreements concluded between Ministries, the National Agency and Regional Development Agencies.

As can be seen from the above description, regionalisation has opened the way to a complex process of institution building in Serbia, shaping inter-institutional relations in different ways (Guglielmetti & Avlijaš, 2013). Throughout the 2000s, different international organisations financed the development of Regional Development Agencies which were expected by local and national stakeholders to become the main recipients and administrators of EU regional funds. However, the institutional framework has been criticised on the grounds that the implementation of measures has often been based on personal commitment and connections (Guglielmetti & Avlijaš, 2013). Moreover, regional policy seems to have been mainly driven by the central government, while local self-governments - the only sub-national units of decentralised state power - were not recognised as key stakeholders and have played only a marginal role in the formulation and implementation of regional policy (Avlijaš & Bartlett, 2011).

Under the guise of regional policy, numerous government agencies as well as the Ministry of Economy provide subsidies to companies throughout Serbia. The total number of subsidies and their amount is monitored by the Serbian Agency for Business Registers. According to the data of the Agency, the total amount of subsidies allocated in 2020 was RSD 42 billion to 4,500 companies; the average subsidy per company was RSD 9,000 (RSD 155,000 to large companies and RSD 6,000 to micro, small and medium sized companies). It should be noted that every Serbian region has a GDP per capita below 75% of the EU average (see Table 1), making them eventually eligible for EU cohesion and regional development funds (Rikalović et al., 2017). Serbia’s GDP per capita is 43% of the EU27 level in Purchasing Power Standards. This feature also exempts the state authorities, for now, from the need to comply with EU state aid rules, and instead should adhere to the rules related to regional development funds when providing subsidies for regional investments (Bartlett et al., 2017).

More recently, the Serbian government’s subsidy programme for attracting Foreign Direct Investment (FDI) adopted since 2015 has had a strong regional dimension, at least in principle. The Programme stipulates a minimum size of investment according to the level of development of the municipality in which the investment is located. The percentage of eligible costs allowable for a subsidy also varies with the level of development of the municipality, from a maximum of 40% of eligible gross salaries in devastated areas down to 20% of eligible gross salaries in the most developed municipalities. Similarly, the subsidies for eligible investment costs increase in relation to the level of underdevelopment of the municipality in which the investment is based.

In practice, however, despite the declared principle of linking financial assistance of the Serbian Development Agency (RAS) to the level of development, the regional distribution of subsidies has been highly skewed to a few districts. In 2018, the greatest share of subsidies has gone to companies in Belgrade (27%) (though it is the most developed Serbian region) and in Pomoravlje (14%). The distribution of the average subsidy per company across districts is shown in Figure 2. The allocation of the government subsidies has favoured companies in some districts over others but, somewhat surprisingly, does not reflect the development level of the districts. The regression line between the average subsidy per company (calculated from data of the Serbian Business Registers Agency and average GDP per capita by districts for 2018) shows virtually no significant relationship, with an extremely low regression coefficient of 0.0086, indicating the absence of any statistical relationship between development level and allocation of subsidies. When the outliers of Braničevo, Pomoravlje and Pirot (which received exceptionally high subsidies) and Belgrade (which has an exceptionally high GDP per capita) are removed from the analysis, the regression coefficient is even lower (0.0037), indicating that there is no relationship between the two variables at the district level.

Under the guise of regional policy, numerous government agencies as well as the Ministry of Economy provide subsidies to companies throughout Serbia. The total number of subsidies and their amount is monitored by the Serbian Agency for Business Registers. According to the data of the Agency, the total amount of subsidies allocated in 2020 was RSD 42 billion to 4,500 companies; the average subsidy per company was RSD 9,000 (RSD 155,000 to large companies and RSD 6,000 to micro, small and medium sized companies). It should be noted that every Serbian region has a GDP per capita below 75% of the EU average (see Table 1), making them eventually eligible for EU cohesion and regional development funds (Rikalović et al., 2017). Serbia’s GDP per capita is 43% of the EU27 level in Purchasing Power Standards. This feature also exempts the state authorities, for now, from the need to comply with EU state aid rules, and instead should adhere to the rules related to regional development funds when providing subsidies for regional investments (Bartlett et al., 2017).

In municipalities categorised as “devastated areas” an investment need be only 100,000 euros and create at least 10 new jobs to become eligible for a subsidy, in municipalities of the second level of development it need be only 200,000 euros and create at least 20 jobs, and so on up to a minimum of 500,000 euros and creation of 50 new jobs in municipalities of the highest level of development.
3.1 THE CURRENT STATE OF REGIONAL DISPARITIES

Some basic indicators on Serbian regions (NUTS 2) are given in Table 1. The four regions have similar estimated populations, but different contributions to GDP, employment levels (highest in Belgrade, lowest in Southern & Eastern Serbia), wages and other indicators. The gap in GDP per capita between the most and the least developed region in 2019 was 1 (Belgrade) to 2.7 (Southern & Eastern Serbia). In relation to the average GDP per capita in PPS in the EU on an index of EU=100, the relative index of Serbia was 39.5 in 2019. However, Belgrade was far closer to the EU average than the other regions with an index of 67.7, reflecting the process of metropolisation that has occurred in Serbia (as elsewhere in Central and Eastern Europe). The relative GDP per capita in PPS of the other regions was 38.3 in Vojvodina, 26.6 in Šumadija & Western Serbia and 25.9 in Southern & Eastern Serbia.

The trends in regional GDP during the 2013–2019 period, available from Eurostat, suggest that the Belgrade region has been contributing an increasing share of Serbia’s GDP (see Figure 3). Growth of gross value added (GVA) by region is shown in Figure 4, showing that both Belgrade and Southern & Eastern Serbia have been growing at a faster rate than the other two regions at least since 2014. Both regions reached a GVA index of 113 in 2019 compared to 100 in 2015, i.e. GVA has increased by 13% over this period. In contrast, Vojvodina has experienced relatively slow growth of just 7%, while the region of Šumadija & Western Serbia has largely stagnated, growing by just under 3% over the four years.

The dominant and increasing contribution of the Belgrade and Vojvodina regions to Serbia’s GDP is confirmed by national statistics that provide data for a longer period. The greatest increase in GDP over the 2010–2019 period was registered in the Belgrade region (74%) followed by the Vojvodina region (70%), while the GDP increase was far less pronounced in Southern & Eastern Serbia (57%) and least in Šumadija & Western Serbia (54%).

The data confirm that there has been an increasing North–South divide between the two more developed and the two less developed Serbian regions regarding their relative contribution to national production. Over the past ten years, policies aimed at reducing the regional gap in economic development have not been successful. Instead of a more balanced economic weight of the four regions, there have been diverging tendencies between the North and the South. Nevertheless, it ought to be noted that Serbia is not a unique case in this respect. There are several countries in the European Union where decades-long policies aimed to help development of the less developed regions have not brought the desired results (Iammarino et al., 2019).

These indicators at regional level (NUTS 2) clearly hide substantial economic disparities in Serbia at the sub-regional level of districts (NUTS 3). Whereas a detailed analysis of various indicators at the lower level will be undertaken in the next section, a first insight into the differences in the level of economic development of Serbian districts can be gained from Figure 5 that presents Gross value added per capita in the

Table 1
Selected indicators on Serbian regions (2019)

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP per capita 2019 (million RSD)</th>
<th>GDP per capita index EU=100 in PPS</th>
<th>Employment rates (%)</th>
<th>Wages (without taxes and contributions)</th>
<th>Youth NEET rate</th>
<th>Employment in technology and knowledge-intensive sectors</th>
<th>R&amp;D personnel and researchers % labour force</th>
<th>Percent of households with broadband access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgrade</td>
<td>1,332</td>
<td>67.7</td>
<td>64.9</td>
<td>74,311</td>
<td>11.3</td>
<td>7.7</td>
<td>1.64</td>
<td>89</td>
</tr>
<tr>
<td>Vojvodina</td>
<td>776</td>
<td>38.3</td>
<td>60.7</td>
<td>57,186</td>
<td>15.1</td>
<td>2.8</td>
<td>0.70</td>
<td>81</td>
</tr>
<tr>
<td>Šumadija &amp; W. Serbia</td>
<td>514</td>
<td>26.6</td>
<td>59.9</td>
<td>51,068</td>
<td>16.8</td>
<td>1.3</td>
<td>0.18</td>
<td>74</td>
</tr>
<tr>
<td>Southern &amp; E. Serbia</td>
<td>497</td>
<td>25.9</td>
<td>56.9</td>
<td>52,875</td>
<td>17.6</td>
<td>1.6</td>
<td>0.32</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Cols. 1-3: Statistical Office of the Republic of Serbia (SORS) on-line data; Cols. 4-8: Eurostat online data [LEST_B_LFE2EMPRTN], [EDAT_LFSE_22], [HTEC_EMP_REG2], [RD_P_PERSREG], [ISOC_B_BROAD_H]. Note: GDP = Gross domestic product, PPS = Purchasing power standard, NEET = Neither in employment, education nor training, R&D = Research & Development.
Serbian districts in 2019, illustrating wide differences between the poorest districts (Jablanica and Pčinja) and the richest districts (Bor, South Bačka, Belgrade). The coefficient of variation of regional GDP by district has shown a tendency towards strong increase after 2014 (see Figure 6).

International comparisons reveal that Serbia has one of the highest dispersions of regional GDP per capita in Europe, measured by the coefficient of variation at the NUTS 2 level (Figure 7). When measured at the NUTS 3 level, however, the international comparison shows that Serbia is at an intermediate level of regional dispersion of GDP per capita in Europe (Figure 8). The difference between the two levels is largely due to the exceptional nature of Belgrade as simultaneously a region and a district. At the district level, Belgrade stands out with a very high level of GDP per capita, in comparison to which all other districts are at a rather even keel of development. According to EUROSTAT, the GDP per capita in Belgrade in 2018 was the equivalent of €10,500, while the GDP per capita in the poorest district (Pčinja) was the equivalent of €2,800.

3.2. RESEARCH ON REGIONAL DEVELOPMENT

The regional divergences in Serbia have attracted substantial interest of researchers of different disciplines in recent years - geographers, demographers, economists, political scientists. Recent studies on regional development in Serbia have prevalently focused on (1) features and measurement of regional development, using different methodologies; (2) the role of policies and institutions; (3) drivers of regional divergence in economic development.

(1) Many recent studies have analysed the trends and main features of regional development in Serbia, confirming widening regional imbalances. Petrović et al. (2011) analysed the increase in disparities in Serbia between the developed North and the underdeveloped South, drawing attention to the difficult situation of a new group of municipalities that suffered economic decline during the period of transition. These “devastated areas” include about one fifth of the territory and population of Serbia and include 20 municipalities that until 1990 had a key role in creating GDP and employment. The authors argue that rural development should be at the centre of regional policy and the main instrument for the revitalisation of the agricultural sector.
Drobnjaković et al. (2016) analysed the trends in traditionally underdeveloped municipalities during 2002-2015, showing that the gap continues to be intensified. The results of their cluster analysis show, however, that there is potential to further develop some of these underdeveloped municipalities, primarily those that have a more favourable population structure. Miljanović et al. (2010) distinguish between traditionally underdeveloped municipalities in rural, mountainous, and border areas and the newly impoverished municipalities, so-called “devastated areas” that emerged during the last two decades. As stressed by Manić et al. (2013), “[e]verything seems to be focused on large centres, where jobs, investment and production are concentrated. Peripheral areas, especially rural ones, are characterised by relatively large disinvestment, high unemployment and low investor interest” (p. 207). Jokić et al. (2015) draw attention to the large disparities in the educational level of the workforce across Serbian regions, with the highest proportion of well-educated working-age people living in Belgrade and Vojvodina.

Golić & Joksimović (2017) observe a massive increase in the spatial Gini coefficient of income per capita at the level of cities and municipalities, from 25.4% in 1996 to 54.9% in 2015. Serbia has been facing a regional polarisation with the emergence of two distinct types of municipalities: those with a high population density, relatively high income per capita and a high share of highly educated people, and “deserted regions” with an elderly population, low incomes and high levels of out-migration leading to depopulation. They conclude that “[d]ue to the concentration of population as well as employees in public sector or large state-owned companies, the differences between regional centres and the rural hinterland are deepening.” (p. 246). As a result, many rural areas have experienced depopulation and migration from villages to towns, leaving these areas with a small working age population.

In 2017, three separate studies of regional development in Serbia identified a three-way polarisation of regional development. Zivanović & Gataric (2017) combined a set of four indicators (population density, employment rate, the structure of economic activity, average income) to compute an index of the degree of development of Serbian districts. They identified (i) Belgrade and South Bačka as the most developed group of districts; (ii) the districts of Vojvodina and ten districts in central Serbia as the group of medium-developed districts; and (iii) a group of underdeveloped regions in southern Serbia. Stamenković & Savić (2017) construct a composite Index of Economic Development (IED) based on five economic indicators, which is used to identify three clusters: (i) Belgrade and South Bačka, as the engine of Serbia’s economic development; (ii) a cluster of 15 districts spread throughout Serbia, with an average level of economic development; and (iii) a cluster of seven districts at a low level of economic development, mostly in Southern & Eastern Serbia (Mačva, Zaječar, Raška, Padina, Toplica, Jablanica and Pčinja). Similarly, Manić et al. (2017) construct a complex regional development index to identify three clusters of districts: (i) developed districts including Belgrade, Vojvodina and two counties in Šumadija and Western Serbia; (ii) medium-developed districts including most counties in Šumadija and Western Serbia; and (iii) underdeveloped counties including most of Southern & Eastern Serbia.

In 2020, a further study by Barrios et al. (2020) used the concept of convergence clubs to analyse gross value added per capita (GVA) over the 2001-2017 period. The research confirmed that the Belgrade region forms its own unique “convergence club”, being the most developed and dynamic region in Serbia, while all other districts fall into two distinct...
convergence clubs. The first, with moderate GVA and slow convergence to Belgrade, consists of five districts in Vojvodina (all except West Bačka and North Banat) along with four districts in Western Serbia (Kolubara, Moravica, Šumadija, Zlatibor), two in Eastern Serbia (Bor, Branićevo) and one in Southern Serbia (Pirot). The other convergence club consists of a group of less developed districts in Southern Serbia with low GVA per capita and with a diverging path of development; this club also contains the two lagging districts of Vojvodina and the districts of Mačva and Podunavlje in central Serbia.

(2) Many scholars studying regional development in Serbia have examined the role of institutions and policy, generally being rather critical of recent government policies. Drobnjaković et al. (2016) criticise regional development policy in Serbia for its emphasis on short-term selective measures of support for the less developed regions. An integrated approach to regional development has been lacking, contributing to the intensification of regional disparities; economic activity and migrants have been attracted to the more developed regions and cities, leading to extreme population and economic concentration. Lutovac et al. (2017) similarly argue that problems of the underdeveloped areas are being addressed solely through direct state subsidies, without adequate institutional support; by focusing exclusively on economic development and ignoring social, geographical, spatial planning and other aspects, regional policies have contributed to widening regional disparities. Maniaet al. (2012) note that “local development cannot be left to spontaneous market forces”.

Golić & Joksimović (2017) are also critical of government’s regional policies. Although the Serbian Constitution requires the state to ensure balanced regional development, very little has been achieved. In Serbian public debate, there are opposing views on regionalisation. While the general public views the concept of regionalisation with distrust, the central government has often experienced it as an attack on state sovereignty, viewing local government representatives as potential competitors. According to the authors, regional development policy has been ineffective because of insufficient decentralisation of decision-making to the local level. Similarly, Maniaet al. (2017) refer to “asymmetrical regionalization” that has left Serbian districts without an intermediate level of regional governance, and therefore without the regional mechanisms to coordinate financial transfers from the centre, or in the future from the EU. This view is supported by Jakopin (2018), who argues that a more balanced regional development cannot be implemented without more effective decentralisation and acknowledging the need for “polycentric” regional development. According to Kleibrink (2015), government policy has been largely based on particularistic political interests and patronage networks, reducing the opportunities for more rational and effective regional policies.

The weak capacity of local self-governments has been identified as one of the main causes of regional disparities by Guglielmetti and Avlijaš (2013), that present a case study of the Timok river in Eastern Serbia. The river flows through Zaječar and Bor and hosts the Djerdap I and II hydro-electric power plants and the copper mining complex of Bor and Majdanpek, and is also close to the pan-European road Corridors IV and X and the river Corridor VII. Despite these advantages, the Timok district has experienced depopulation and impoverishment. New competencies have been passed on to local authorities without ensuring adequate funds for their implementation, while the local municipalities had failed to mobilise local resources. Mihajlović (2014) draws attention to the importance of adequate funding for regional development, arguing that the North Bačka region has benefited from projects undertaken with Hungary that were able to rely on substantial EU funding for cross-border projects.

(3) Scholars have also analysed the main drivers of regional imbalances in Serbia, including the transition to market economy, Foreign Direct Investment (FDI), infrastructure development and local entrepreneurship.

Regional discrepancies have often been attributed to the transition effects of privatisation and the associated restructuring process, which contributed to a concentration of the economy into large urban centres that have attracted domestic and foreign companies (Bartlett, 2009; Jakopin, 2014, 2018). Economic transition has hindered or even reversed the economic development of some regions in Southern & Eastern Serbia and Šumadija & Western Serbia, due to its negative effects on the industrial and mining activities that had traditionally been the basic economic activities of these regions (Lutovac et al., 2017).

A major role in Serbia’s regional development has been played by FDI. FDI was initially attracted predominantly to service industries (retail trade, banking, telecommunications) with little export potential, and much less to manufacturing (Uvalić 2010; Estrin & Uvalić 2014, 2016). The domestic banks were sold to European banks which mainly based their headquarters in Belgrade (Anićić 2011). More than half of FDI was invested into the Belgrade region and, to a lesser extent, to Vojvodina, while the underdeveloped regions of Šumadija & Western Serbia and Southern & Eastern Serbia attracted less than 10% each (Vračarević & Jovanović 2015). Recognising the adverse effects of FDI inflows on regional inequalities, Anićić et al. (2011) called for “a favourable investment ambient” in the less developed regions to ensure a more balanced regional development (Anićić 2011: 60). However, Arandarenko et al. (2021) have shown that more recent FDI policies have succeeded in rebalancing the regional labour market: most new jobs were created in the two less-developed regions of Šumadija & Western Serbia and Southern & Eastern Serbia (31% each), with 21% created in Vojvodina and only 18% in Belgrade; the quality of employment has also improved in the two less developed Serbian regions and there has been a convergence in the per capita wage fund shares between regions. Another factor that has strongly influenced regional development in Serbia is the existence (or lack) of adequate transport infrastructure. The location of some districts next to major
transport routes has positively influenced the allocation of resources during transition (Drobnjaković et al., 2016). The Corridor X highway has strengthened regional centres located on its north-south route in terms of population, economic development, and infrastructure, in contrast to the economic decline and depopulation of many peripheral and rural areas located further away from the highway. Along similar lines, Petrović et al. (2011) argue that infrastructure investment is needed to improve living standards and attract additional investment to less developed regions, including investment in high quality health and educational institutions.

Some scholars have identified dynamic local entrepreneurship as a key driver of regional development (Jakopin, 2015). To assist local entrepreneurs, new start-ups and SMEs, many municipalities and cities in Serbia have established industrial zones on dedicated sites. However, it is the more developed Serbian regions that have a more favourable environment for the development of small and medium-sized enterprises (SMEs) and entrepreneurship (Manićat et al, 2017).

The overall picture that emerges from these studies is the forging ahead of the Belgrade district from the rest of the country. The three-way polarisation of Serbian districts identified in some of the “static” studies and the existence of three separate convergence clubs identified in the “dynamic” study by Barrios et al. (2020) reflect the diversity of convergence clubs. All studies agree, despite different methodologies and different selection of indicators, that there is a complex differentiation of regional development among Serbia’s districts. The emerging consensus identifies a group of intermediate districts achieving some developmental progress, mostly located in Vojvodina and central Serbia, alongside isolated pockets of development elsewhere, and another group of “devastated” lagging regions mostly located in southern Serbia, but with large pockets of deprivation also existing in the more developed regions in other parts of the country. The underdeveloped areas face huge structural and institutional problems, with rural-urban migration resulting in depopulation of many rural areas.
In order to identify the nature of regional development in the various regions and districts of Serbia we will now focus on the labour market adjustments during the recent period of rapid restructuring. The regional pattern of wage growth reflects underlying changes in the supply and demand for labour, which in turn are determined by structural changes in the economy. Previous research by Arandarenko and Jovičić (2007) already emphasised the need for differentiated labour market policies across regions. Stankov & Dragićević (2015) have shown that wage differences between North and South Serbia have increased over the 2001–2010 period.

To better understand the regional evolution of earnings in Serbia’s districts, we regress the change in wages over a five-year period on the initial level of wages, to identify whether there has been a pattern of catching up of the less developed regions (see Figure 9). The analysis shows that the rate of growth of wages over the 2015-2019 period was inversely related to the initial size of the average wage rate. The regression excludes Belgrade, which was an outlier with a far higher rate of wage growth than would be expected for its initial level of wages.

The analysis indicates that beta-convergence in wage rates has taken place in Serbia during 2015-2019, suggesting a catching-up process in regional development. The relationship is statistically strong, with an R-squared of 61.7%. On average, a district with an average wage that is 1,000 RSD below the next higher district is expected to have a wage growth rate that is 1 percentage point above that of the next higher district. In practice, districts deviate from this expected outcome, as some districts have wage growth that is above that predicted by their initial average wage rate, while others have wage growth below the expected rate.

In order to illustrate the deviation from expected catching-up effects in wages, Figure 10 shows the average of the residuals from the regression equation by region. The average residual is positive for Vojvodina and especially for Southern & Eastern Serbia, indicating a stronger than expected catching-up effect, while the average residuals for the region of Šumadija & Western Serbia are negative, indicating a weaker than expected catching-up effect. This mirrors to some extent the earlier reported finding of two convergence clubs in the districts of Serbia outside Belgrade, while Belgrade is in a class of its own with far stronger wages growth than expected by its initial wage level.

The analysis reveals that the catching-up effect in wages is the strongest, relative to expectations, in Southern & Eastern Serbia, where five out of the eight districts with the strongest effects are Toplica, Nišava, Pirot, Pênja and Podunavlje. Since some of these districts are among the least developed, this is an encouraging sign of positive rebalancing of regional differences (although Jablanica and Braničevo districts have extremely weak catching-up effects). The catching-up effect is the weakest in Šumadija & Western Serbia: four of the eight districts with the weakest effects are Raška, Zlatibor, Moravica and Rasina, while the district of Šumadija has a very

**Figure 10**

**Deviation from expected catching-up effect in wages, by region 2015-19 (in percentage points)**

Source: The data show the average of the residuals from the “initial wage”-“wage growth” regression averaged over districts within each region. Belgrade is not shown since this is an outlier with a stronger effect.
strong catching-up effect. The effects in the Vojvodina districts are the most variable, with both relatively strong and weak catching-up effects; South Banat has the weakest, while Central Banat the second strongest catching-up effect.

To gain a further insight into how structural changes have played out on a regional and local level, we apply the method of shift-share analysis to identify the structural change factors underlying variations in the demand for labour across economic sectors. To do this we use data on employment levels of the different economic sectors by district over the 2016-2019 period. The shift-share methodology breaks down the regional pattern of regional (district) employment growth by sector into a component that reflects the overall growth of the economy, a component which reflects the overall growth of each economic sector, and a residual “unexplained” component which reflects the comparative competitiveness of the region in each sector. For example, the relatively strong wage growth effect in some districts of Southern & Eastern Serbia might reflect the specific pattern of change in the demand for labour in those districts resulting from investment in manufacturing industry by foreign investors.

A shift-share analysis carried out on employment data from 2015 to 2019 shows that most of the “unexplained” structural change in the Serbian economy took place in the manufacturing sector, but with very different results for each of the four regions (see Figures 11a-11d).

In the Belgrade region, there are three main outliers: negative employment in manufacturing, indicating a comparative disadvantage in this sector; and positive employment in administrative and support services and in education, indicating a comparative advantage in these sectors. Between 2015 and 2019 this region lost its comparative advantage in public administration due to fiscal consolidation caps on employment in this sector (and in some other sectors). Vojvodina has...
several districts with a comparative advantage in manufacturing, and also has districts with comparative advantages in transport, mining, ICT and health sectors. Both Šumadija & Western Serbia and Southern & Eastern Serbia have a single district with a large comparative advantage in manufacturing (despite the former having a comparative disadvantage in manufacturing).

Since manufacturing is a sector in which all four regions have districts with a comparative advantage, and since this is a propulsive industry generating large value added and exports, it is of interest to explore this sector in more detail. Figures 12a-12d show the regional comparative effect in manufacturing by district in each region during 2015-2019.

The analysis confirms that the Belgrade region has a competitive disadvantage in manufacturing (Figure 12a). Its main regional competitive advantage is in administration support services, reflecting the location of many company headquarters in the capital city, closely followed by the provision of education services, reflecting the large number of university faculties located in Belgrade. The Vojvodina region has three districts with a strong regional competitive effect in manufacturing (Figure 12b). Geographically, these districts are contiguous and lie on the route of the major north-south motorway (Corridor X) running through Serbia. They also host three Free Zones to which large multinational companies have been attracted. For example, the North Bačka district hosts the Subotica Free Zone, where several important companies are located: the German Flender company, the Norma Grupa Jugoistočna Evropa, Contitech Fluid Serbia, Zoppas Industries Serb, Swarovski and Ametek.11 The South Bačka district with the regional capital Novi Sad has a Free Zone that hosts the Lear Corporation. In contrast, the more peripheral districts of North Banat and South Banat have a comparative disadvantage in manufacturing and could be said to have suffered deindustrialisation over the four-year period. Within the region of Šumadija & Western Serbia, the Mačva district has a strong comparative advantage in manufacturing (Figure 12c). It is in this district that the Sabac Free Zone is located, which hosts Yazaki Serbia, a producer of electronic equipment for vehicles.12 Among the other districts of this region, only Kolubara has a comparative advantage in manufacturing.

The Southern & Eastern Serbia region has a single district – Niš - with a large comparative advantage in manufacturing (Figure 12d). Some major foreign investors have located in Niš including YURA Corporation, Sinwon, Olympias Group, Johnson Electric, Leoni, Aster Textile, Integrated Micro Elec

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11 https://www.usz.gov.rs/producers
12 https://www.dnb.com/business-directory/company-profiles.yazaki_srbija_doo.5e030ca35ba5003596b6d6ef7f7b46bc.html#company-info
tronics and Zumbotel. The Industrial Zone of Niš hosts the Xingyu Automotive company, which is building a 60 million facility to produce lamps for motor vehicles. A Niš Science and Technology Park was opened in 2020 in collaboration with Niš University’s Electronics Faculty aiming to capitalise on the legacy of electronics industries in the city. This reflects the city’s substantial regional competitive effect in the ICT industry. Niš also benefits from its own international airport and a strategic location on Corridor X motorway. Elsewhere in the Southern & Eastern region, Free Zone Smederevo in the Podunavlje district (with a positive regional competitive effect) hosts 13 companies, while Free Zone Pirot hosts Tigar Tyres, a Michelin company (although unlike Niš, the Pirot district does not have a regional comparative advantage in manufacturing).

The analysis confirms positive employment effects in the manufacturing sector particularly in those Serbian districts that have attracted the most important foreign investors. In order to facilitate economic development, Serbia has relied strongly on attracting FDI by offering generous subsidies along with creating a supportive business climate (Bartlett et al., 2017, 2019). These measures have sustained faster economic development, but have also contributed to increasing regional disparities (as noted earlier).

The government’s policy to attract FDI has been the main driver of structural change and regional reallocation of resources in Serbia. After 2015, much of FDI has gone into the manufacturing sector in the less developed regions. Serbia has relied less on local economic development that draws on local resources, including human capital, social capital and entrepreneurship, despite various measures to support SMEs and innovative firms. Savić et al. (2015) propose the promotion of local clusters of businesses specialising in knowledge-intensive services, creative industries, and life sciences. In line with the triple helix approach, Aničić et al. (2016) highlight the essential role of local business associations and networks, local self-government bodies, and local universities in Serbia. Local entrepreneurship will be a key driver of regional development in the future, but this will require an improvement of the quality of local institutions. There is strong evidence from the regions of Europe of a link between the quality of government institutions and the capacity of regions to innovate (Rodriguez-Pose, 2013; Rodriguez-Pose & Di Cataldo, 2015).

To support the connection between the two models of development, it would be important to link local entrepreneurs and SME support to the new multinational corporations that have begun their activities in Serbia in recent years. The Ministry of Economy and the RAS have implemented a Supplier Development Programme in 2019 to link SMEs to multinational companies that provides direct grants of up to 23 million dinars (approx. EUR 200,000) to SMEs satisfying the criteria and has a total budget of 463 million dinars (approx. EUR 4 million) (European Commission, 2019 SBA Fact Sheet Serbia). In the first year, 19 beneficiaries were supported with a total of 2.6 million euros of grants. These measures ought to be expanded, as they will provide new networks between local and foreign companies, in this way also ensuring major spillover effects of FDI.

A more balanced model of regional development that would strengthen the local economy would also require better provision of digital infrastructure. In Serbia, the development of the digital economy has benefited the districts with a high concentration of employment in technology and knowledge-intensive sectors, a high proportion of R&D personnel and researchers in the labour force and a high share of households with broadband access. The districts are predominantly in the north and in Belgrade. To address this potential negative effect on regional development, the EBRD has approved a loan of 18 million euros to Serbia to develop communication infrastructure in rural areas, reaching up to 90,000 households and 600 schools in defined territories. This is unlikely to be sufficient to redress the comparative advantage of Belgrade and the northern districts in the emerging digital economy.

Serbia has adopted a Smart Specialisation Strategy for the 2020-2027 period which aims to develop a knowledge-based and innovation-based economy. This strategy, however, also favours those districts endowed with higher education institutions and a high share of scientific personnel in the labour force. Unfortunately, as can be seen from Table 1 above, the distribution of employment in technology and knowledge-intensive sectors is heavily skewed to Belgrade and Novi Sad, as is the share of R&D personnel and researchers in the labour force. Similarly, the percentage of households with broadband access is far higher in the north than in the south, east, and west of the country. This implies that efforts to promote the knowledge economy and smart specialisation are likely to reinforce, rather than diminish regional divergences.

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15 Economic and Reform Programme for the period 2021-2023, p. 138.
Regional inequalities have worsened over the past two decades in Serbia and are now among the highest in Europe. The main policy orientation after 2001 was market liberalisation, which tended to reinforce existing regional inequalities. Initially, in the absence of inward FDI, market forces led to the agglomeration of activities in the capital city and other northern districts, and the devastation of the traditional industrial regions elsewhere in the country. Substantial barriers to new firm formation and SME development prevented the less developed regions from mobilising the power of domestic entrepreneurship to challenge incumbent firms which benefited from their locational advantage in Belgrade and other northern districts. The regional policies designed to overcome regional disparities have involved the distribution of subsidies to businesses according to their level of development. This approach has had little effect on reducing regional disparities. The new law on regional development passed in 2009 only reproduced the same failed policies, but with the introduction of the NUTS classification of territorial division and the creation of a regional development infrastructure for administrative and policy purposes. The main policy reliance on the distribution of subsidies to less developed areas continued, encouraging the development of clientelistic networks and distorted markets.

The introduction of fiscal decentralisation to municipalities along with increased powers in the early to mid-2000s had a real potential to provide an opportunity for less developed municipalities and districts to begin the process of economic growth based upon entrepreneurial potential. Some local self-governments began to construct industrial zones to attract domestic and foreign investment. However, the progress made was brought to a shuddering halt by the onset of the global economic crisis which hit the Serbian economy hard. One of the solutions to the crisis in public finance was to reverse the fiscal decentralisation reforms and centralise public resources at the central level. The new policy adopted to attract FDI with generous subsidies had a substantial regional component. This policy became a major component of de facto regional policy and had considerable success in reducing unemployment and attracting FDI to less developed regions, creating jobs and generating some regional convergence. It led to deep structural changes which benefitted a renewal of the manufacturing sector, with regional advantages to several districts in the North, but also to localised growth poles in both the Šumadija & Western Serbia and the Southern & Eastern Serbia region, based around the major southern urban centre of Niš.

However, the capital city of Belgrade continued to pull ahead of the rest of the country. With the transition to a knowledge economy based on digital connectivity, Belgrade benefitted from the high concentration of high technology employment, R&D and research personnel. This gave a further push to regional divergence. Both Belgrade and Novi Sad have benefitted from the emerging digital economy, the construction of Science Parks and the implementation of the Smart Specialisation Strategy which has provided funding to high technology start-ups. The regional policy of subsidies to less developed regions continued to have little impact, especially since it turns out that the subsidies were not effectively targeted to the least developed regions of the country.

To overcome the renewed growth of spatial and regional inequalities generated by the structural shifts to the knowledge economy and the digital businesses that are fast emerging, a better distributed version of the knowledge economy will be needed in the future which spreads the benefits of the digital economy to the less developed regions. This presents an opportunity because, by its nature, the digital economy is less tied to specific places than older factory-based business models. Providing broadband connectivity to rural areas and less developed areas could enable entrepreneurs in those regions to develop new businesses based on their relatively low housing costs and attractive green environment. The coronavirus pandemic has shown the viability of remote working, and working from home, and could pave the way to a new model of business in Serbia in which young entrepreneurs are attracted to base themselves and work in rural locations where the costs of living due to congestion as well as environmental pollution are lower than in the main urban centres.

To make this vision a reality would require a much greater level of fiscal decentralisation to the municipalities, to enable them to act independently from central government and generate the conditions needed to attract highly skilled professionals in the digital economy. Instead of an “FDI attraction policy”, what ought to be enabled is a “human capital attraction policy” to rural areas, led by empowered self-governing local authorities in the municipalities throughout Serbia, thus creating a genuinely rebalanced economic landscape that would share the benefits of growth throughout all parts of the country.
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A policy to attract FDI has become a major part of de facto regional policy, reducing unemployment and attracting foreign investors to some less developed regions and districts supporting a revival of the manufacturing sector. However, such policies have also led to a renewed growth of spatial and regional inequalities.

Further measures are needed to link local entrepreneurs and SMEs to multinational corporations and their global value chains through appropriate support for upgrading local SMEs and upskilling the local workforce. In addition, a more balanced provision of digital infrastructure and improved broadband connectivity could enable entrepreneurs in those regions to develop new businesses and take advantage of relatively low housing costs and an attractive green environment in small towns and rural locations.

To make this vision a reality would require a greater level of fiscal decentralisation to enable local municipalities to generate the conditions needed to attract highly skilled professionals and entrepreneurs. Instead of an "FDI attraction policy", what ought to be enabled is a "human capital attraction policy" to rural areas, led by empowered self-governing local authorities in municipalities throughout Serbia. This could create a genuinely rebalanced economic landscape that would share the benefits of growth in all parts of the country.

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