



**WORLD BANK GROUP**

**IFC**

International  
Finance Corporation



## Serbia

# Market Study of Intercity Bus Transport

The sectoral analysis of the intercity bus transport market in the Republic of Serbia was conducted in cooperation with the representatives of the World Bank within IFC's Serbia Investment Climate Program. Under the Program, the Government of the Republic of Serbia and the International Finance Cooperation have signed the Cooperation Agreement envisaging, inter alia, the provision of technical support by the WBG to the Commission for Protection of Competition for the improvement of competition and market regulation in the Republic of Serbia. The selection and prioritization of sectors was carried out based on the WBG Markets and Competition Policy Assessment Tool (MCPAT).

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The analysis was prepared by the World Bank team, for the project purposes. The views expressed in this study are those of the authors and do not necessarily reflect the views and opinions of the Commission for Protection of Competition.

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## Abbreviations and acronyms

API	Application Programming Interface
ARAFER	French Rail Transport Regulation Authority ( <i>Autorité de Régulation des Activités Ferroviaries</i> )
CEO	Chief Executive Officer
CoC	Chamber of Commerce
CPC	Commission for Protection of Competition
DQC	Driver Qualification Card
EMIS	Emerging Markets Intelligence Service
EU	European Union
GPS	Global Positioning System
ICT	Information and Communication Technology
IFC	International Finance Corporation
IGES	German Institute of Health and Social Studies ( <i>Institut fuer Gesundheits- und Sozialforschung</i> )
ISIC	International Standard Industrial Classification of All Economic Activities
IT	Information Technology
MCPAT	Markets and Competition Policy Assessment Tool
NAICS	North American Industry Classification System
NTIS	National Timetable Information System
OECD	Organisation for Economic Co-operation and Development
OLS	Opinions and Lifestyle Survey
POI	Point of Interest
PRM	Passengers with Reduced Mobility
RFI	Request for Information
RPTA	Road Passenger Transport Act
VAT	Value Added Tax
WBG	World Bank Group

## Preface

In 2019, the World Bank Group (WBG) put forward a ‘New Growth Agenda’ for Serbia and identified the competition policy as one of the top seven policy areas to accelerate economic growth in the country.<sup>1</sup> The WBG found that the competition policy in Serbia should not only tackle anti-competitive business practices but also limit distortions caused by anti-competitive government interventions. The reform of product market regulations should play a key role in this endeavor.

To demonstrate what reforms of product market regulations would entail in practice, the WBG partnered with Serbia’s Commission for Protection of Competition (CPC) to prepare two market studies. Following prioritization, the transport of passengers and cargo were selected as sectors of focus. In 2020, the WBG and the CPC completed the study on the rail cargo market, and some of the recommended reforms are under way as part of the Railway Sector Modernization Investment Project Financing. This report complements the 2020 study with an in-depth look at barriers to competition in passenger transport, in particular intercity buses.

The report has been completed in June 2021. Legal references are current as of December 31, 2020. Work has been carried out under the Serbia Investment Climate Program of the International Finance Corporation (IFC). The Serbia Investment Climate Program is implemented in partnership with the UK Good Governance Fund and the British Embassy in Belgrade.

## Acknowledgments

This report has been prepared by Tatjana Sofijanić, Maciej Drozd, Ryan Kuo, and Jan Orłowski (all WBG), in collaboration with the Commission for Protection of Competition of the Republic of Serbia. The report benefited from inputs by Olga Šipka, Michał Wolański, and Svetlana Vukanović; and exchanges with Lazar Šestović, Dusko Vasiljević, Victor Aragones, Elwyn Davies, and Jun Rentschler (all WBG). Jelena Bralić (WBG) provided administrative support. The report was prepared under the Serbia Investment Climate Program of IFC, led by Eugeniu Osmochescu (IFC) and Maciej Drozd (World Bank). The work has been supervised by the Commission for Protection of Competition, Martha Martinez Licetti (World Bank), Damien Shiels (IFC) and directed by Stephen Ndegwa (World Bank), Thomas Lubeck, and Ary Naim (both IFC).

The team would like to thank the Ministry of Construction, Transport and Infrastructure of the Republic of Serbia and the Serbian Chamber of Commerce (CoC); and representatives of the business community in Serbia for providing information and for sharing their perspectives.

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<sup>1</sup> More information on ‘Serbia’s New Growth Agenda’ can be found at <https://www.worldbank.org/en/country/serbia/publication/serbia-new-growth-agenda>.

## Executive Summary

**Coach services are critical to passenger mobility in Serbia.** For more than a decade, intercity and regional buses have been the most popular form of mass transit on domestic routes and the second-most popular form of transit on international routes in Serbia. In 2018, buses accounted for 26 percent of passenger-kilometers, more than 1.5 times the combined share of buses and trains and more than three times the share of buses in the European Union (EU). Buses reached the majority of Serbia's towns, and service has been regular. In comparison, passenger trains move less than 1 percent of passengers in Serbia, and there are no scheduled commercial flights on domestic routes.

**Consumers stand to save annually more than US\$20 million in bus fares and station fees if competition was stronger.** In 2019, Serbia's per capita income stood at 41 percent of the average for 27 EU member states (after adjusting for differences in purchasing power).<sup>2</sup> However, despite differences in incomes, per-kilometer fares on connections linking two major cities were approximately double the average fare in EU countries.<sup>3</sup> Higher prices have been also found on routes connecting medium-size cities and small towns. Data collected for this market study indicate that typical fees charged by bus stations for embarkation and disembarkation of passengers were at least 35 percent higher in Serbia than in Germany or Poland. World Bank Group (WBG) staff calculations suggest that a 10 percent decrease in ticket prices could generate around US\$20 million in benefits for bus passengers in Serbia.<sup>4</sup> Additional benefits are to be expected from reductions of station fees paid by passengers in Serbia.

**Coach services in Serbia are concentrated at the route level and vertically integrated with station services.** According to data collected for this market study, two-thirds of all bus connections in Serbia were served by one operator only. Concentration has been lower at the national level, with the 10 largest business groups serving 52 percent of the route network in Serbia. While coach services tend to be concentrated naturally, the regional dominance of providers combined with the scarcity of national operators is unusual compared to market structures in other economies, such as Poland. Most bus stations, of which there is typically only one per city, are owned by bus companies, reinforcing local dominance of operators. Data collected by the Commission for Protection of Competition (CPC) and the WBG indicate that bus stations in Serbia commonly add surcharges to tickets sold onsite and favor connected bus providers over competitors.

**Market functioning is partly constrained by inherent characteristics of coach services.** In principle, barriers to entry are relatively low for bus firms as fixed costs are moderate, inputs are available, and the quality of services is observable. However, network economies encourage consolidation in the industry and improve the position of larger firms. Such firms seek to increase their market power further by controlling bus stations, an essential facility for the provision of bus services in Serbia. Once established, dominant firms have incentives to collude, not least because they encounter rivals in a wide

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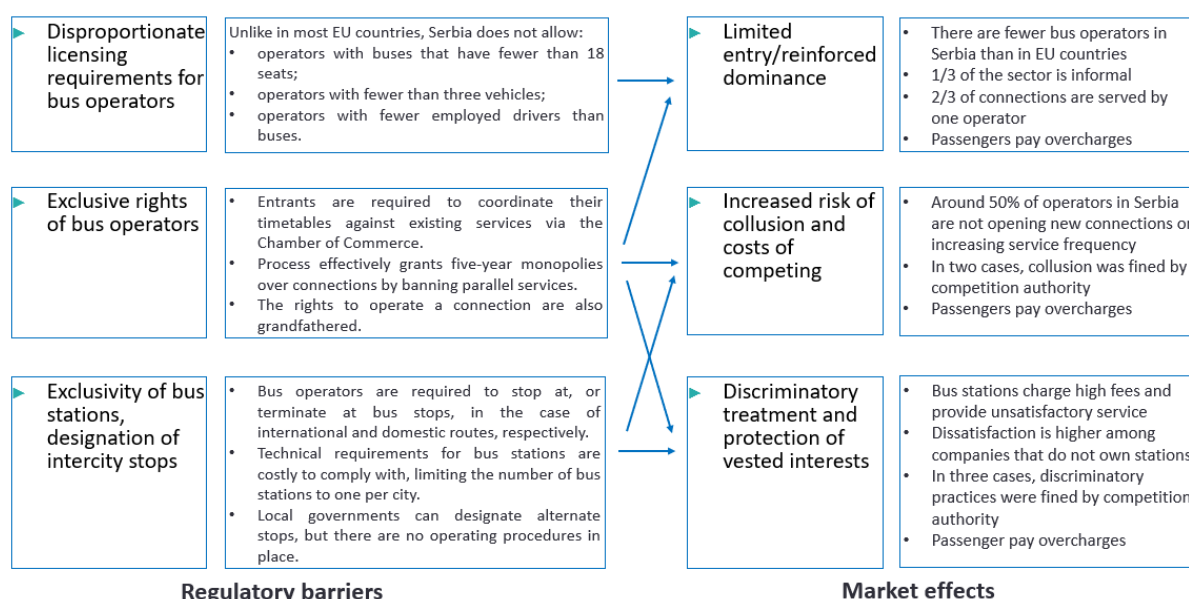
<sup>2</sup> World Bank staff analysis of Eurostat data.

<sup>3</sup> World Bank staff analysis of publicly available information on prices on the Belgrade–Novi Sad route and information on prices in 19 EU countries provided by the consultancy firm Steer Davies Gleave (2016) in a study for the European Commission. Steer Davies Gleave (2016) analyzed the highest and the lowest fares charged for coach travel between the capital city and another major city. In all of the analyzed countries, both the highest and the lowest fares were higher than the price of travel from Belgrade to Novi Sad. Ticket prices have been corrected for differences in purchasing power.

<sup>4</sup> World Bank staff analysis based on industry data from the Serbian Statistical Office and the Business Registry Agency, assuming price elasticity of 0.69, in line with Small and Winston (1999).

range of markets. Such multi-market contact increases gains from collusion and makes defection more costly and easier observable. Since 2007, the CPC has fined bus companies twice for entering into anti-competitive agreements and bus station operators thrice for abuse of dominance.

**Government interventions contribute to subpar market outcomes by limiting entry, facilitating collusion, and protecting vested interests.** The Government of Serbia intervenes in coach services in two major ways: (a) by regulating coach services through the Road Passengers Transport Act (RPTA) and its bylaws and (b) by enforcing sector regulations through the issuance of licenses, timetable registration, and firm inspections.<sup>5</sup> These interventions serve to promote safety, availability, and quality of service. However, market regulations and their enforcement go beyond the necessary minimum to achieve policy objectives and restrict market operations unnecessarily. The CPC and the WB



G have identified three sets of restrictions that are the most harmful to competition based on market effects (Figure E.1).

*Figure E.1. Market effects of key regulatory barriers to competition in Serbian coach services*

Source: WBG-CPC staff analysis.

**Competition between bus companies is also held back by the lack of comparable information on bus connections.** The word ‘timetable’ (*red vožnje*) was in the top 20 Google search queries in 2020, demonstrating demand for online information on transport connections. Currently, passengers obtain information on individual bus connections mainly at information counters in bus stations. No complete and dependable electronic database of bus connections exists in Serbia. This gap holds back the development of e-ticketing: According to data collected by the WBG and CPC for this market study, only 35 percent of operators sell their tickets online.<sup>6</sup> Even for operators that sell tickets via the internet,

<sup>5</sup> National and local authorities intervene also in the market by providing state aid to bus companies and station operators. However, the support to these companies represents only a small fraction (less than 2 percent) of sector revenues.

<sup>6</sup> Data for 74 operators that provided information on total and internet bus ticket sales.

online sales account for only 6 percent of total ticket sales, compared to more than 60 percent in the United Kingdom.

**This study recommends three actions to improve market functioning in the Serbian coach services:**

*First, the Government of Serbia could amend the Road Passengers Transport Act to relax licensing rules for bus companies and limit exclusive rights of bus operators and bus stations.* As part of these changes, the licensing requirements for bus operators could be harmonized with Regulation EC/1071/98, route authorizations replaced with route notification, timetable coordination via the Chamber of Commerce (CoC) removed, ex ante technical requirements for bus stations reduced, new minimum service standards set, and procedures for designating alternate bus stops adopted. These changes are expected to reduce informality in the sector, improve safety and quality of service, invigorate competition, and limit overcharges. Adverse adjustment costs from reform are expected to be limited as the aggregate amount of service and, by extension, sector employment are expected to increase.<sup>7</sup> A list of key regulatory changes that includes detailed legal references and justifications is presented in section 3 of this study.

*Second, the Ministry of Construction, Transport and Infrastructure (the Ministry) could collect and open data on intercity bus connections.* Currently, the Ministry is in charge of registering timetables for domestic and international connections, giving it access to information on all intercity and regional bus schedules in Serbia. However, the Ministry does not publish most of the information it collects. It could create an application programming interface to make this information publicly available, thus allowing third-party service providers to build e-ticketing and information platforms. This change is expected to spark the creation of new digital services and empower consumers to compare transport providers.

*Third, the CPC could continue to monitor large bus companies and bus station operators.* Regulatory changes and the publication of connection data should decrease the risk of anti-competitive firm conduct. However, given natural market characteristics, such as network economies and multi-market contact, anti-competitive behavior could persist. The CPC is well placed to continue to observe market developments and where necessary launch competition investigations. The Ministry can support these efforts by embracing competitive market functioning as one of the key objectives for the sector policy, in addition to ensuring passenger safety and access to services.

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<sup>7</sup> In the rare event of loss of service on select low-traffic routes, the government may explore direct subsidies as a competition-neutral method of incentivizing the preservation of service.

## Introduction

**This market study focuses on intercity and regional bus services for three reasons.** First, buses are the main mode of mass transit in Serbia. According to Eurostat, buses accounted for 26 percent of passenger-kilometers in Serbia in 2018, more than three times the average share of buses in European Union (EU) countries.<sup>8</sup> Second, the Serbian competition authority, Commission for Protection of Competition (CPC), has repeatedly investigated and fined anti-competitive behavior of companies offering intercity bus travel and bus station services. These cases point toward structural barriers to competition, and they call for research on government interventions that could improve market functioning. Finally, recent evidence from other European countries, such as the United Kingdom, Sweden, Germany, Italy, and France, suggest that facilitating competition *in* the market for coach services (that is, allowing multiple operators to operate and compete directly),<sup>9</sup> as opposed to competition *for* the market (that is, granting monopolies or exclusive rights to operate based on a tendering or approval process), can increase welfare.<sup>10</sup>

**The World Bank Group (WBG), the CPC, and the Ministry of Construction, Transport, and Infrastructure of the Republic of Serbia (the Ministry) collaborated on this market study.** The study relies on the Markets and Competition Policy Assessment Tool (MCPAT), an analytical framework developed by the WBG based on work in more than 60 countries. The study has been conducted jointly by the WBG and the CPC under the terms set out in article 47 of Serbia's Competition Act. Data for the study have been obtained from (a) publicly available sources, such as Eurostat, the Statistical Office of the Republic of Serbia, and the Chamber of Commerce (CoC), and the Serbian Business Registry Agency; (b) proprietary sources, such as data held by bus companies and station operators as well as providers of market intelligence; (c) regular exchanges with representatives of the Ministry and the CoC. Where necessary, proprietary data have been blacked out in this document to protect confidential information.

**The study reviews structural barriers to competition and provides practical recommendations for policy makers.** The study is structured as follows. Section 1 provides an overview of the market for intercity and regional bus services in Serbia, summarizing key market characteristics and government interventions. Section 2 identifies key barriers to competition in (a) bus transport and (b) station services. Section 3 closes with recommendations for government interventions that could level the playing field between providers, empower consumers, and enable the creation of new digital services.

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<sup>8</sup> Personal cars accounted for 74 percent of passenger-kilometers, and trains accounted for less than 1 percent of passenger-kilometers in Serbia in 2018. Commercial airlines do not fly on domestic routes.

<sup>9</sup> The terms 'coach services' and 'intercity and regional bus services' are used interchangeably in this report.

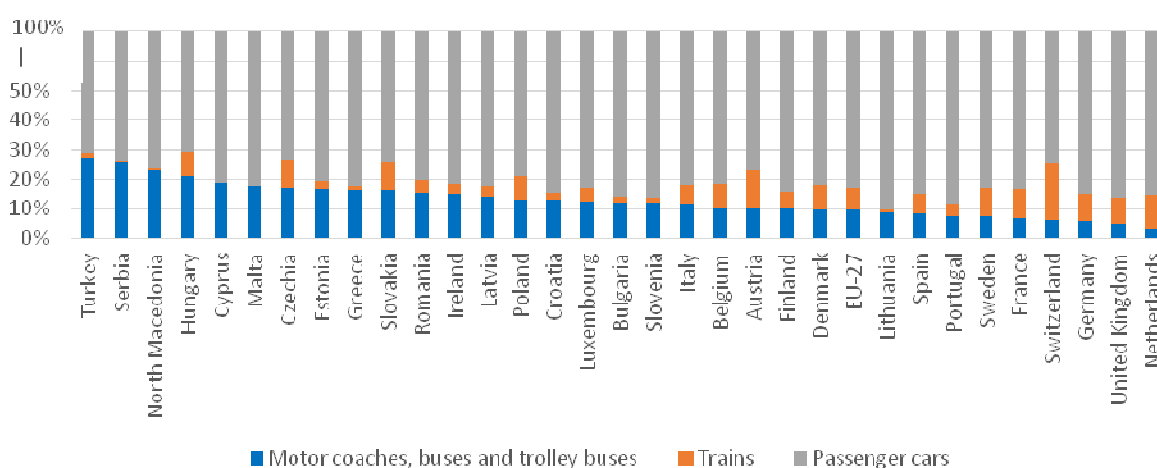
<sup>10</sup> Long-distance coach services have been opened to competition in the United States (1982), the United Kingdom (1980), Sweden (1999), Germany (2013), Italy (2013), and France (2015), among other countries. A summary of the impacts of these reforms on market outcomes is available in section 2.1.2 of this report.

## 1. Market Overview

### 1.1. Market definition

**Buses are the main mode of mass passenger transport in Serbia.** According to Eurostat, buses accounted for 26 percent of passenger-kilometers in Serbia in 2018, more than three times the share of trains and more than 1.5 times the combined share of buses and trains in the EU (Figure 1). Individual transport by car accounted for 74 percent of passenger-kilometers in Serbia in 2018. The contribution of trains and airplanes was negligible as there are no domestic air connections and train service is infrequent. Passengers rely on buses for a wide range of travel purposes, from work to leisure and family visits. Buses are critical to the operations of important sectors of the economy. For instance, buses are the fastest and most reliable way to reach Serbia's main tourist destinations. Spas and mountain towns, responsible for 50 percent of tourist overnights in Serbia, can generally only be reached by car or bus, while train service to Belgrade and Novi Sad, the country's two major cities that account for 28 percent of overnights, is infrequent.<sup>11</sup>

*Figure 1. Modal split of passenger transport (2018)*



Source: Eurostat.

Note: The chart shows the share in passenger-kilometers of different modes of ground passenger transport. Data for several countries estimated by Eurostat.

**Intercity and regional bus services are distinct from urban and suburban services (Table 1).** Intercity and regional bus services are generally long-distance services, with typical route lengths of 50 km and more.<sup>12</sup> Unlike urban and suburban services, which connect different points in the same metropolitan

<sup>11</sup> Data on arrivals and overnights from the Serbian Ministry of Tourism. Data on connectivity from the website of the Serbian passenger train company Srbija Voz.

<sup>12</sup> For this study, the terms 'route' and 'line' are used interchangeably to indicate a way or path between an origin and a destination (for example, route Belgrade to Novi Sad via Indjija). Routes or lines originating and ending in the same places but passing through different locations are treated as substitutes. The terms 'connection' and 'departure' are used interchangeably to indicate a specific departure along one route (for example, 2 p.m. departure from Belgrade to Novi Sad via Indjija). Finally, the terms 'timetable' and 'schedule' are used interchangeably to indicate a set of departures along one route (for example, 2

area, intercity and regional services connect several regions or smaller municipalities in the same region. They serve a variety of travel purposes (work, family, leisure, and other), and passengers travel at different intervals, whereas urban and suburban services are usually focused on regular daily commutes to and from workplaces. Passengers on intercity and regional routes as well as urban/suburban connections typically substitute travel by bus with travel by personal vehicle, as other modes of transport are not widely available in Serbia.

*Table 1. Typology of bus services in Serbia*

		International	Domestic		
		Intercity	Regional	Suburban	Urban
Typical distance		200 km or more	50 km or more		Less than 50 km
Destination		Cities	Cities and towns	Towns and villages	Metropolitan area
Typical frequency		Weekly/daily		Daily	
Purpose		More heterogeneous			More homogeneous
Alternatives	Individual transport	Personal car			Personal car; nonmotorized transport
	Mass transport	Plane and train (infrequent service in Serbia)	Train (infrequent service in Serbia)	—	Other urban transport (for example, tram)

Source: World Bank staff elaboration.

**The study considers intercity and regional bus services on both domestic and international routes.** The markets for international and domestic intercity bus travel share many similarities. Both types of services are offered with the same technology and similar product characteristics. Both types of services are governed by the Road Passenger Transport Act and operate under similar conditions. There is high demand for both domestic and international bus travel. According to data from the Statistical Office of the Republic of Serbia, in 2019, 38 percent of international passengers using mass transportation travelled by bus, compared to 93 percent of domestic passengers using mass transportation.<sup>13</sup> Buses also accounted for more than one-fifth of international passenger-kilometers in international transport. International and domestic buses do differ on one key aspect: the former face competition from airlines while the latter have no competition from other modes of mass transport. However, their similarities and the important contribution of both types of services to mass transit call for their parallel analysis in this market study.

**The market study concentrates on regular scheduled bus services.** These are services open to all passengers that follow a predetermined timetable. In Serbia, there also exist scheduled services that are not open to all passengers, such as those taking people to school or to work, as well as unscheduled, occasional services (for example, charter service). These special services are not covered in this market

p.m. departure from Belgrade to Novi Sad via Indjija and 4 p.m. departure from Novi Sad to Belgrade via Indjija). In Serbia, a timetable provides information on (a) the business name of the bus company operating the route; (b) the name of the route; (c) the itinerary, that is, initial, intermediate, and final bus stops and times when the service is scheduled to arrive at and depart from these stops; (d) the interval of departures; and (e) the validity period of the timetable.

<sup>13</sup> The remaining passengers in domestic transport traveled primarily by train, while the remaining passengers in international transport traveled primarily by plane.

study as they are generally paid for by organizations rather than individuals and are therefore subject to different market dynamics.

**Intercity and regional bus services comprise several relevant markets.** Since domestic travel on trains and airlines is rare in Serbia and personal cars are not a form of mass transit, this study focuses on intercity and regional travel by bus. In passenger transport services, relevant markets are usually defined geographically, as (sets of similar) origin–destination pairs (routes). It is at the level of such individual connections that passengers generally consider substituting providers. The product itself is relatively homogenous in Serbia, as bus companies offer similar levels of service using nearly identical technology.

**The study also covers bus station services.** These are essential inputs into the provision of bus transport. In contrast to transport services, the relevant market for bus station services is defined not only by geography but also by the type of service. In Serbia, bus stations provide at least three different services. First, they are a place of embarkation and disembarkation for passengers. This service is generally paid for by the bus company and the relevant market is geographic, as bus companies would not replace the embarkation services of one bus station with the services of a distant bus station. Second, bus stations in Serbia offer ticketing sale services which are paid for by bus companies or passengers. Bus stations offer this service in competition to other bus stations as well as other retail channels, such as direct sales by bus drivers and online sales. Finally, bus stations in Serbia offer information services to passengers that are free of charge. Online information platforms are beginning to emerge, and some bus firms provide information on their connections directly to passengers. However, bus stations continue to be the main source of reliable and comprehensive information about intercity and regional bus services in Serbia.

## **1.2. Market features**

**Coach markets are generally contestable.** The natural barriers to entry are generally low in the coach sector. The production technology and the three essential inputs—vehicles, drivers, and infrastructure—are widely available, allowing new providers to challenge incumbents. New entrants can easily buy, lease, or sell buses, suggesting that fixed costs are low and sunk costs are negligible compared to other types of mass transit. There are no significant barriers to customer switching on routes that have multiple providers. Newcomers need to convince customers about the reliability of their service, but the quality of service is generally observable, allowing firms to establish a reputation relatively quickly. In comparison to bus transport, there are more inherent barriers to contestability in station services as bus stations are frequently natural monopolies due to infrastructure costs and consumer preferences.

**Nevertheless, network economies can drive industry consolidation and increase barriers to entry.** They encourage consolidation in the bus industry and improve the position of larger and more integrated firms in relation to their smaller and less-integrated competitors. Three types of network economies apply to coach services in particular: economies of density, economies of scope, and economies of network structure. Economies of density mean that unit costs of production decline with increases in the number of passengers. For instance, bus companies that can cluster passengers are able to reduce their costs. Economies of scope exist when the cost of producing one output (for example, connection from A to B) decreases when other outputs are also produced (for example, connection from A to C). This applies for example to costs that are shared across connections, such as the cost of operating a bus terminal. Economies of network structure are savings that bus companies can achieve when they rearrange routes on the same network (for instance, by moving from a point-to-point model

to a hub-and-spoke model of service) or when they can offer passengers more integrated travel solutions. Empirical studies have confirmed the existence of network economies. At the same time, the existence of economies of scale—decreasing unit costs with increases in output—in bus transit is disputed in the literature.<sup>14</sup>

**Multi-market contact may also impede competition in the intercity and regional bus market.** Bus operators typically compete with one another along several routes, each of which constitutes a relevant market. Such ‘multi-market contact’ tends to make collusion easier: in cartels, competitors are often dissuaded from undercutting rivals (that is, deviating from a potential cartel price) by the threat of rivals cutting prices further and triggering a price war in response. When multi-market contact exists, rivals within a cartel may trigger price wars along multiple markets to punish operators that deviate from cartel prices, even if the original deviation occurred in only one market. This increased threat makes cartel arrangements more likely by dissuading defection from the cartel.

**In addition, access to infrastructure and market regulations could constrain market operations.** Given network economies and potential savings from the operation of transport hubs, bus firms have incentives to own bus stations and limit the use of these stations by rival firms. Access to terminal infrastructure could therefore limit the ability of competitors to establish themselves on routes that connect third-party stations. Evidence of discriminatory firm behavior of station owners in Serbia is discussed in detail in section 2.2.3 of this report. Market regulations can also constrain the ability of firms to compete in the market. Regulatory barriers, such as route exclusivity, are common in coach services despite a wave of sector liberalization initiated in the United States and the United Kingdom in the 1970s and 1980s. Government interventions in the bus market in Serbia are characterized in section 1.5 of this report, and their impact on competition is discussed in sections 2.1.1–2.1.2 and 2.2.1–2.2.2.

### **1.3. Market outcomes**

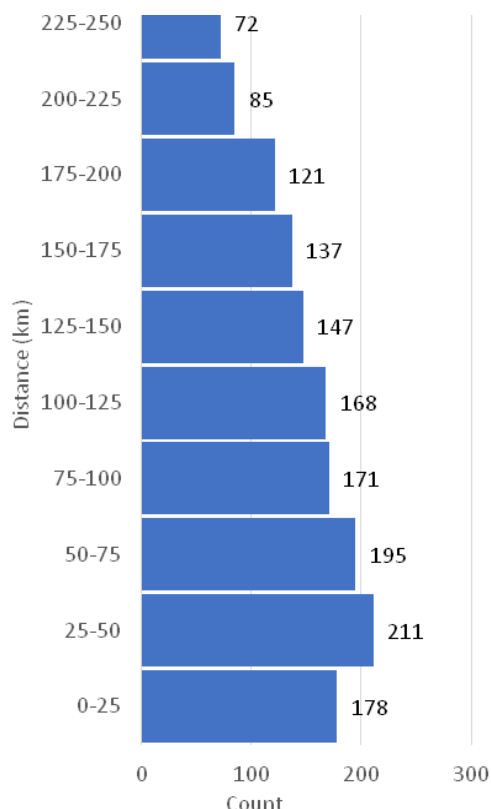
**In 2019, more than 56 million tickets were bought for intercity and regional buses.** According to data from the Serbian Statistical Office, around 97 percent of the tickets were sold for domestic connections and 3 percent for international connections. The number of tickets sold for domestic connections has been increasing since 2017, until the outbreak of the COVID-19 pandemic, while the number of tickets on international connections has been decreasing between 2017 and 2019, because passengers shifted to air travel. On average, passengers made 6.4 trips in 2019, covering distances of 68 km per domestic trip and 534 km per international trip.

**Serbia has a dense network of long-distance routes and local connections.** All regions in Serbia have regular bus services, and most destinations are served daily. According to the most recent data published by the CoC, around 80 percent of the routes in Serbia are either longer than 250 km or shorter than 100 km. Distances between 25 km and 50 km are the most common (Figure 2). This is because most cities do not have direct train connections and buses are relied on for regional mass transportation needs.

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<sup>14</sup> See Berechman (1993) for an in-depth discussion of network economies and detailed review of empirical studies examining economies of scale in bus transit.

Figure 2. Number of bus connections by distance between origin and destination (2016)



Source: World Bank staff analysis of data published by the Serbian CoC.

**The prices of coach services and station services in Serbia are above EU benchmarks.** In 2019, Serbia's per capita income stood at 41 percent of the average for 27 EU member states (after adjusting for differences in purchasing power).<sup>15</sup> However, despite these differences in income levels, bus tickets were typically more expensive in Serbia than in EU countries. A one-way bus ticket between Belgrade and Novi Sad typically cost around RSD 1,000 (US\$10) in 2019, a higher per-kilometer fare than the fare paid for the most expensive ticket on most comparable routes in the EU for which data were available.<sup>16</sup> A comparison of bus fares in Serbia and other EU countries in which buses accounted for a significant share of passenger-kilometers also suggests higher fares in Serbia. Finally, data on bus station fees collected by the World Bank staff indicated that the prices of terminal services were higher in Belgrade than in Berlin, Warsaw, and Bratislava.<sup>17</sup>

<sup>15</sup> World Bank staff analysis of Eurostat data.

<sup>16</sup> In a study for the European Commission, the consultancy Steer Davies Gleave (2016) analyzed the highest and the lowest fares charged for coach travel between the capital city and another major city in 19 countries. In all of the analyzed countries, both the highest and the lowest fares were higher than the price of travel from Belgrade to Novi Sad. The differences in ticket prices between Serbia and the EU were even larger after adjustments for differences in purchasing power.

<sup>17</sup> See section 2.2, figure 12, for more details.

Table 2. Coach fares in Serbia and other European countries (2019)

Connection type	Serbia	Other countries	Regular fare		
			Serbia (EUR)	Other (EUR)	Difference (%)
Connecting large cities	Belgrade–Subotica	5 connections (PT, HR, HU, PL)	10.3	8.9	+16
Connecting medium-size cities	Kragujevac–Požarevac	9 connections (PL, SK, LT, PT)	7.1	5.5	+29
Connecting medium-size cities with small towns	Kraljevo–Raška	18 connections (PL, SK, LT, PT)	3.5	5.4	–35
	Požarevac–Svilajnac	8 connections (PL, SK, LT, LV)	7.1	2.9	+145

Source: World Bank staff analysis based on publicly available information.

Note: HR (Croatia); HU (Hungary); LT (Lithuania); LV (Latvia); PL (Poland); PT (Portugal); SK (Slovakia); Comparator connections have been identified for five European countries with average per capita incomes below the EU average. The distance and types of comparator connections are similar to the distance and type of connections in Serbia.

**The Serbian competition authority has uncovered anti-competitive practices in coach services and station services.** The CPC has conducted multiple proceedings against several bus companies and/or bus station operators for suspected breach of competition rules prohibiting restrictive agreements and abuse of market dominance. In station services, the CPC has opened five cases against bus station operators to assess whether their price policies were in breach of antitrust rules and issued fines thrice. It has also fined bus companies twice for entering into anti-competitive agreements. Details of these cases are presented in sections 2.1.3 and 2.2.3 of this report.

#### 1.4. Market participants

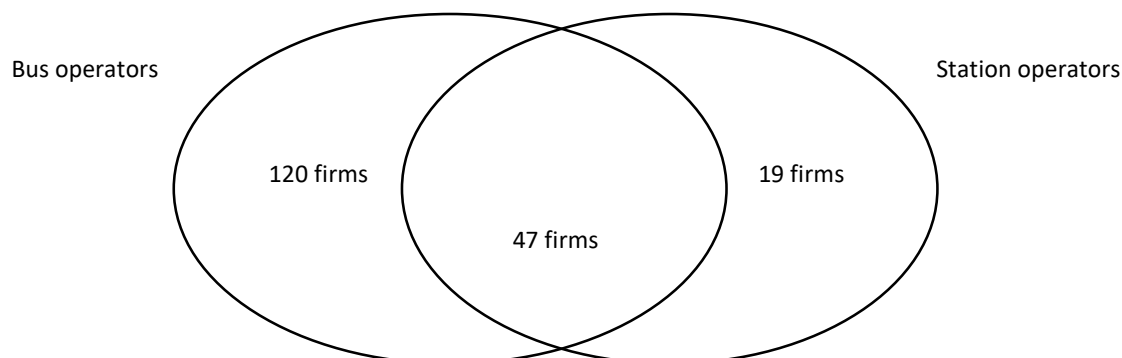
##### Bus companies and bus station operators

**In 2019, there were almost 200 companies with registered bus transport or bus station operations; around 25 percent of the firms held licenses for both types of services (Figure 3).** According to data from the Ministry, 39 firms were licensed to provide both bus transport and bus station services in 2019. Data collected by the CPC and the WBG for this market study indicate that an additional 8 firms provided both types of services, either directly or through parent/subsidiary companies. In addition, there were around 120 ‘pure-play’ bus firms and around 20 ‘pure-play’ station firms. About 90 bus firms operated on international routes, and 52 percent of the firms that were active internationally also operated on domestic connections. Bus firms obtained most of their revenues from ticket sales, while the main source of income for bus stations were platform fees paid by bus operators.

**Compared to EU countries, there were fewer bus firms in Serbia.** In 2018, fewer bus firms per 100,000 inhabitants were registered in Serbia than in each of the 27 EU member states (Figure 4), including EU member states with lower income per capita such as Bulgaria and Croatia. The average age of bus firms

registered in 1990 or later was 19.1 years in Serbia, similar to the result in neighboring Romania and the regional average.<sup>18</sup> No similar data were available for bus station providers.

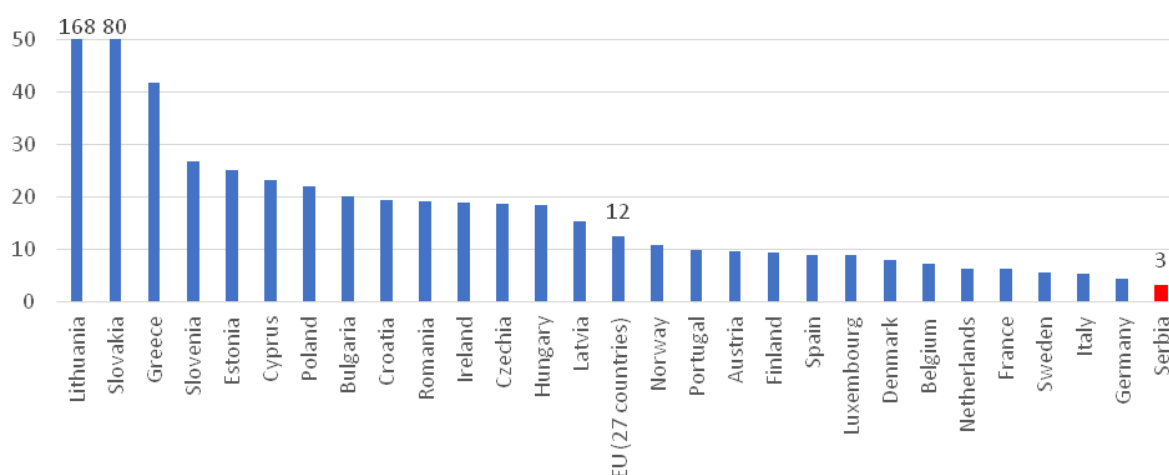
*Figure 3. Vertical integration in domestic intercity bus services in Serbia (2019)*



Source: World Bank staff analysis of data provided by the Ministry and firms for this report.

Note: Firm numbers are estimated and may differ slightly from actuals due to the lack of response to the questionnaire submitted by the CPC to firms (see Annex A).

*Figure 4. Bus firms per 100,000 inhabitants in Serbia and EU countries (2018)*



Source: World Bank staff analysis of Eurostat data.

Note: The chart shows the number of firms active in road transport of passengers (except urban transport). The data correspond to International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4 code H4393. No data are available for Malta.

**Coach services are fragmented at the national level but concentrated at the local level.** At the national level, the provision of intercity and regional bus services is more fragmented in Serbia than in other European countries. The 10 largest business groups accounted for 52 percent of all bus-kilometers in Serbia (Table 3). The network share of Arriva Litas and Niš-Ekspres, the two largest bus companies, has been around 6 percent each (Table 4). In comparison, Flixbus, Germany's largest provider, was

<sup>18</sup> Data on firm age were obtained from EMIS for Serbia and five EU countries in which buses accounted for more than 15 percent of total passenger-kilometers (Czechia, Hungary, Slovakia, Romania, and Estonia). The data correspond to 2017 North American Industry Classification System (NAICS) codes 4852-9.

responsible for 93 percent of bus-kilometers in 2017,<sup>19</sup> while National Express held a dominant position nationally in the United Kingdom. However, at the connection level, service provision is concentrated, with around two-thirds of all connections served by one operator only (Figure 6). The share of exclusive routes does not appear to vary with changes in route length.

*Table 3. Network share of the 10 largest business groups*

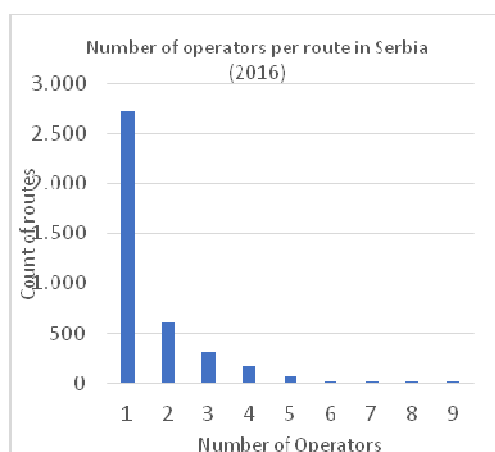
Rank	Name	Share in total bus-kilometers (%)
1	Kavim	9
2	Banbus Group	9
3	Arriva Litas	6
4	Niš-Ekspres	6
5	Lasta	6
6	Jugoprevoz Kruševac	5
7	Vicont Vektor Group	4
8	Raketa Aćimović	4
9	Europa Bus	3
10	Moto Boem Trans	2

*Table 4. Network share of the 10 largest companies*

Rank	Name	Share in total bus-kilometers (%)
1	Arriva Lita	6
2	Niš-Ekspres	6
3	Autoprevoz	5
4	Jugoprevoz Kruševac	5
5	Lasta	4
6	Raketa Aćimović	4
7	SP Sokoprevoz	3
8	Banbus	3
9	Adio Tours	3
10	Europa Bus	3

Note: Business groups are groups of companies with ownership ties.

*Figure 5. Number of operators per route in Serbia (2016)*



Number of operators	Share of routes (%)
1	69
2	15
3	8
4	4
5	2
6	0.5
7	0.2
8	0.2
9	0.1

Source: World Bank staff analysis of data published on the website of the Serbian CoC.

Note: The chart displays all connections (that is, not only links between points of origin and destination but also links between points of origin/destinations/intermediate stops). Analyzed routes are limited to a sample of A–B connections with geo-tagged locations. The chart shows information for business groups. See Annex C for more information on methodology.

<sup>19</sup> Data from the German Institute of Health and Social Studies (*Institut fuer Gesundheits- und Sozialforschung*, IGES).

## Travelers

**In Serbia, two groups of passengers typically use domestic buses.** Intercity buses are preferred by travelers who do not own a car (for example, students and tourists) and travelers who own a car but prefer to travel by bus (for example, commuters). Since car ownership and use among women is less frequent than among men,<sup>20</sup> female travelers are likely overrepresented among passengers of domestic intercity and regional buses. Young and senior travelers are also likely to depend on buses more, as they have been found to use personal vehicles less frequently.<sup>21</sup> Buses are also critical for tourists, who rely on this mode of travel to visit mountain towns and spas—Serbia’s most popular tourist destinations—which generally cannot be reached by train. On international connections, travel appears strongly linked to family visits. The larger the Serbian diaspora in a country, the bigger the number of international arrivals from this country.<sup>22</sup>

**Travel by bus is generally cheaper than other modes in Serbia, attracting more price-sensitive travelers and making other modes of transport imperfect substitutes.** A return trip from Belgrade to Niš, Serbia’s third largest city located 240 km south of Belgrade, costs at least RSD 5,000 (US\$50) by personal car,<sup>23</sup> while travel by bus costs around RSD 2,000 (around US\$20).<sup>24</sup> Similarly, a return bus ticket from Belgrade to Vienna, the most popular destination for bus travel from Serbia, costs around EUR 50 (around US\$60), whereas a return flight or trip by car costs around EUR 120 (around US\$140).<sup>25</sup> Travel by bus is slower than travel by personal car or plane. Given the lower cost and longer duration, it is likely that bus passengers are more price-oriented than travelers who use other modes of transport.

### 1.5. Government interventions

**Intercity passenger transport by bus and bus station services are regulated in Serbia.** These services are mainly governed by the RPTA,<sup>26</sup> which is expanded on in bylaws issued by the Ministry and the CoC. The provisions of this act are covered in detail in section 2 of this report. Some RPTA bylaws, such as the regulation on the maximum amount of station fees and the regulation on timetable coordination in international passenger transport, are yet to be enacted. Apart from the RPTA, other laws relevant for intercity transport are the Road Traffic Safety Act,<sup>27</sup> the Act on Agreements in Road Transport,<sup>28</sup> and the Act on Working Hours of Drivers in Road Transport and Tachographs<sup>29</sup> (and their bylaws). For ticketing and related information services, apart from the RPTA, the Commerce Act and the Electronic Commerce

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<sup>20</sup> Gender Equality in Transport in Serbia (2019).

<sup>21</sup> Gender Equality in Transport in Serbia (2019).

<sup>22</sup> World Bank staff analysis of data published by the Ministry of Tourism of the Republic of Serbia and the International Organization for Migration.

<sup>23</sup> Assuming a fuel price of RSD 150 (around US\$1.5) per liter of gasoline and fuel economy of 7 L per 100 km.

<sup>24</sup> Quote from the online ticketing site busticket4.me for travel in April 2021.

<sup>25</sup> Quotes from busticket4.me and flights.google.com for travel in April 2021. The estimate of the cost of travel by car assumes a fuel price of RSD 150 per liter of gasoline (around US\$1.5) and fuel economy of 7 L per 100 km.

<sup>26</sup> The RPTA was enacted in 2015, but its full implementation only started in February 2017.

<sup>27</sup> The Road Traffic Safety Act sets out general traffic rules that apply to all vehicles, including buses.

<sup>28</sup> The Act on Agreements in Road Transport sets out laconic rules that apply to agreements between carriers and passengers, their mutual rights and obligations stemming from these agreements, rules on liability of carriers, statute of limitation periods, and so on.

<sup>29</sup> The Act on Working Hours of Drivers and Road Transport and Tachographs sets drivers’ working hours, daily/weekly driving limits, breaks, and rest periods to prevent fatigue and guarantee road safety. To ensure that these rules are implemented, tachographs must be installed in buses. Bus companies must also ensure that buses undergo regular six-month inspections.

Act, the Consumer Protection Act, the Obligations Act, and the Data Protection Act (and their bylaws) are also relevant laws. These laws set out the framework rules for (electronic) ticketing, setting up and managing of online platforms and search engines, and the storing and processing of personal information.

**The Ministry issues licenses, registers timetables, and conducts inspections.** The RPTA authorizes the Ministry to license bus companies and bus station operators (see sections 2.1.1 and 2.2.1 for a detailed description of licensing conditions).<sup>30</sup> Licenses are issued for 10 years in the case of passenger transport and 5 years in the case of bus station services.<sup>31</sup> Operators are required to maintain service or their authorization is revoked.<sup>32</sup> The Ministry is also responsible for registering domestic timetables following a coordination process within the CoC.<sup>33</sup> Once a timetable is registered, competitors cannot offer departures on the same route within 15–75 minutes (on domestic routes) or 6–8 hours (on international routes). The Ministry enforces sector regulations through inspections.<sup>34</sup>

**The CoC also plays a vital role in regulating intercity transport and bus station services.** The CoC is the national business association, and membership in the association is mandated by law.<sup>35</sup> The CoC is composed of 19 industry associations, and each association is divided into business groups. The Transport Association and its Group for Road Passenger Transport and Bus Stations oversees matters related to intercity transport of passengers. The group is tasked, among others,<sup>36</sup> with classifying bus stations and coordinating domestic timetables before they are submitted by operators to the Ministry (see section 2.1.2 for a detailed description of timetable coordination and registration).<sup>37</sup> Further, the CoC sets out general terms and conditions of domestic intercity transport.<sup>38</sup>

**State aid linked to passenger transport is limited.** According to data from the Serbian Business Registry Agency, companies in passenger transportation have received public support in the amount of up to RSD 287 million (around US\$2.9 million) in 2018 and up to RSD 262 million (around US\$2.6 million) in 2019.<sup>39</sup> The bulk of this support went to companies which are also active in urban and peri-urban passenger transport<sup>40</sup> and receive subsidies for those types of transport too.<sup>41</sup> Bus companies active in intercity transport also benefit from horizontal programs, such as general support for job creation and regional

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<sup>30</sup> Articles 15 et seq. and 38 et seq. of the RPTA.

<sup>31</sup> Articles 18 and 48 of the RPTA.

<sup>32</sup> Articles 74 and 114 of the RPTA.

<sup>33</sup> Article 65 of the RPTA.

<sup>34</sup> Articles 146 et seq. of the RPTA. Other law enforcement agencies such as the Police of Serbia, the Data Protection Officer, and the Ministry of Economy are also authorized to enforce relevant road passenger transport regulations.

<sup>35</sup> Article 10 of the Act on Chambers of Commerce.

<sup>36</sup> According to articles 48, 50, 58, and 63 of the RPTA, the CoC also sets the distance table for intercity transport. The distance table specifies the distance between cities and the minimum driving time between bus stations and/or bus stops on intercity routes.

<sup>37</sup> Articles 50 and 66 of the RPTA.

<sup>38</sup> Article 58 of the RPTA.

<sup>39</sup> 2019 Income Statements, group account number 64 - revenues from subsidies, donations, and grants.

<sup>40</sup> According to the 2019 Lasta's Annual Report, urban and peri-urban passenger transport accounted for 45 percent of the company's revenues in 2018 and 2019. The revenue split is not available for Niš Ekspres, but the 2018 data on vehicle-kilometers travelled indicate that urban and peri-urban transport were dominant (12.9 million km travelled in intercity transport and 14.4 million km travelled in urban and peri-urban transport).

<sup>41</sup> According to the Public Utilities Act (for example, Articles 24 and 29), local governments are entitled to subsidize utility services, including urban and peri-urban passenger transport.

development provided by the Autonomous Province Vojvodina. In contrast, aid for operations of bus stations ranged between RSD 6 million and RSD 7 million (US\$60,000–70,000) in 2018 and 2019. Other companies providing ancillary services, such as operators of parking facilities and logistics companies, have also received public support. Information on state aid to companies specializing in ticketing and information services related to bus transport could not be obtained.

## **2. Barriers to Competition**

**In total, six key barriers to competition have been identified in the market for coach services and bus station services (Figure 7).** The review was based on the analysis of market regulations and competition cases in the sector. The review of market regulations encompassed three laws and 18 bylaws (or their drafts). The analysis of competition cases spanned cases in Serbia and other countries. Most barriers to competition stem from anti-competitive regulations, in particular (a) rules that limit entry or reinforce dominance (for example, exclusive rights of bus operators) and (b) rules that facilitate collusion or increase the cost to compete (for example, rules on timetable coordination). In addition, competition has been impeded by anti-competitive firm behavior, including restrictive agreements between bus companies and abuse of dominance by operators of bus stations. For each of the regulatory barriers to competition, this chapter discusses (a) the harm to competition, (b) the stated policy objective, and (c) alternative solutions that are either less distortive or more effective or both. This section also provides more information on anti-competitive firm practices, their effects, and additional remedies (other than competition law enforcement) that could be taken to limit their occurrence.

Figure 6. Types of anti-competitive restrictions in intercity passenger transport regulations

Main types of rules based on market effect	Specific types	Frequency in intercity transport and station services regulations	Key restrictions
Rules that reinforce dominance or limit entry	1.1 Monopoly rights and absolute ban for entry	8	exclusive authorization of timetables, excessive licensing requirements for bus companies (e.g. use of 18-seat buses), excessive technical requirements for bus stations
	1.2 Relative ban for entry and expansion of activities	3	
	1.3 Incumbents participate in entry/exit decisions	10	
	1.4 Requirements for registry (licenses and permits)	13	
Rules that facilitate collusion or limit firm's ability to differentiate themselves	2.1 Rules that facilitate agreements/reduce firms' choice of strategic variables	10	timetable coordination, no right to freely suspend service or reduce volume of services provided
	2.2 Restrictions on type of products and services/format and location	7	
	2.3 Price control	1	
Rules that discriminate and protect vested interests	3.1 Discriminatory application of rules and standards	8	discretion of local authorities to decide on location/placement of intercity bus stops
	3.2 Discretionary application of rules	2	
	3.3 Lack of competitive neutrality vis a vis government entities	0	
	3.4 State aid/incentives distorting level playing field	0	

Source: WBG staff analysis based on the MCPAT. See Annex A for more information on the MCPAT.

## 2.1. Domestic and international intercity transport

**Competition between providers of domestic and international coach services is impeded by three key barriers.** First, the licensing conditions for bus operators are more demanding in Serbia than in its main comparator jurisdiction, the EU. In Serbia, bus companies are required to own or hire-purchase at least three buses and employ at least one bus driver per vehicle. The type of vehicle that can be used for coach services is also restricted to buses with at least 18 seats. These requirements do not apply in the EU, and they push many Serbian operators into informality, unleveling the playing field and limiting the effectiveness of licensing. Second, unlike in EU countries, bus companies are required to obtain an authorization for every route on which they would like to operate. In the case of domestic connections, operators are also required to coordinate their timetable with the timetables of other companies. This authorization is redundant, and the involvement of the largest business association, the CoC, in the coordination of timetables harms competition by limiting the entry of new operators and facilitating collusion among existing operators. Third, bus companies have been found to engage in restrictive agreements on prices and other strategic variables. Anti-competitive agreements severely limit market operations by impeding price formation and consumer choice. Each of these three barriers is discussed in detail in the following sections.

### 2.1.1. Licensing requirements for bus operators

**To obtain a transport license, firms are required to meet conditions related to (a) residency, (b) professional competence, (c) vehicles and drivers, (d) capital, and (e) reputation:**

- Firms must be headquartered in Serbia.<sup>42</sup>
- Transport managers employed by firms must hold a professional competence certificate issued by the Ministry.<sup>43</sup>
- Operators are required to own or hire-purchase at least three buses for regular intercity transport,<sup>44</sup> and domestic intercity transport can only be performed by buses with at least 18 passenger seats.<sup>45</sup>
- The number of professional drivers must be at least equal to the number of vehicles.<sup>46</sup>

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<sup>42</sup> Article 27 of the RPTA.

<sup>43</sup> Article 23 of the RPTA. To obtain this certificate, transport managers are required to pass an exam organized by the Ministry. This exam tests a candidate's knowledge in the fields of (a) civil, commercial, labor, and fiscal laws; (b) business and financial management of the company; (c) access to the road passenger transport market; (d) technical standards and aspects of vehicle exploitation; and (e) road traffic safety and working hours of drivers. See Article 25 of the RPTA.

<sup>44</sup> Buses for international transport need to be manufactured after October 1, 1993. See Article 25 of the RPTA.

<sup>45</sup> Article 59 of the RPTA. However, on routes of up to 50 km, suburban buses could also be used for intercity transport, while on routes up to 15 km, urban and suburban buses can be used for intercity transport.

<sup>46</sup> Every professional driver must hold a valid Driver Qualification Card (DQC). To acquire the DQC, new drivers must complete the initial Driver Certificate of Professional Competence Qualification Training. To retain the DQC, drivers must complete Driver Certificate of Professional Competence Periodic Training over a five-year cycle. Exceptionally, drivers who obtained their licenses before the rules on Certificate of Professional Competence qualification came into force, or within one year from entry into force of those rules, as well as persons with a motor vehicle driver diploma, are not required to pass the initial Certificate of Professional Competence training.

- Operators are required to have capital and/or reserves in the amount of at least EUR 4,000 for domestic (EUR 2,000 for the first vehicle and EUR 1,000 for each additional vehicle) and EUR 19,000 for international regular transport (EUR 9,000 for the first vehicle and EUR 5,000 for each additional vehicle).<sup>47</sup>
- Neither the operator nor its transport manager can have committed serious offenses, including severe violations of the RPTA and traffic safety rules.<sup>48</sup>

**The RPTA's licensing requirements go beyond the EU requirements.** The EU's Regulation EC/1071/2009 sets forth four requirements for admission to the occupation of road passenger transport operator: stable and effective establishment, good repute, professional competence, and financial standing.<sup>49</sup> The RPTA sets forth additional requirements with respect to minimum vehicle and driver counts and vehicle size restrictions. In contrast to the RPTA, Regulation EC/1071/2009 explicitly states that having one owned, hire-purchased, or leased vehicle is sufficient and makes no mention of minimum vehicle size or driver count requirements.

**The RPTA and its bylaws are not clear on whether insurance policies or bank guarantees can be used as evidence of financial standing.** The Guidance on Application for Transport Licenses issued by the Ministry allows operators to provide the following as evidence: (a) decision or excerpt from the business register stating the capital amount (for newly founded companies), (b) balance sheet, (c) clear property title, or (d) other evidence such as independent property valuation reports. The guidance does not clarify whether insurance or bank guarantee is an acceptable means to demonstrate financial standing. In contrast, the EU's Regulation EC/1071/2009 permits member states to agree or require that an undertaking demonstrate its financial standing via a bank guarantee or professional liability insurance. The EU's Regulation EU/2020/1055 goes even further and stipulates that operators' financial standing can be demonstrated by way of any other binding document proving that the operator has at its disposal the stipulated amounts (for example, a joint and several guarantee for the operator).<sup>50</sup>

## Policy objective

**Stricter licensing requirements serve to promote quality of service and transport safety.** Fleet size and driver count requirements are intended to enhance the capacity of operators and in turn contribute to effective and safe performance. In the context of a regulated, scheduled service based on exclusive authorization (see section 2.1.2), such requirements are meant to reduce the risk of service interruptions or outages. Similarly, minimum driver counts are intended to promote formal employment

<sup>47</sup> Article 22 of the RPTA.

<sup>48</sup> Article 21 of the RPTA. Convictions that lead to a loss of good repute include convictions for (a) for the company/entrepreneur, serious economic offences/misdemeanors in the field of public road transport and public transport safety; (b) for the transport manager, criminal offences against public road transport, public transport safety, property, commerce, labor, legal system, general safety of people and property, and environment; (c) any other criminal offence if it includes a prison sentence; and (d) economic offence against public road transport or public transport safety. In addition to this, the transport manager cannot have been imposed a protective measure prohibiting the performance of certain activities in economic and financial operations. Convictions for which the rehabilitation period elapsed are not considered relevant.

<sup>49</sup> Member states may exempt from these requirements only operators engaged exclusively in national passenger transport operations, which have only a minor impact on the transport market because of the short distance involved. The UK guidance on the operation of the 'short distance exemption' in Great Britain envisages that this exemption automatically applies on service within a radius of 10 miles, or on a case-by-case basis on longer distances in less densely populated areas.

<sup>50</sup> The Regulation EU/2020/15 came into force in July 2020 but will apply only as of February 2022.

of drivers and to allow drivers adequate rest to avoid fatigue and increase road safety. Finally, financial capacity requirements are meant to enable proper administration of transport operations and continuity of service.

### **Harm to competition**

**Stricter licensing requirements for bus companies shrink the pool of service providers by limiting eligibility and deterring firm entry.** The obligation to own or hire-purchase three 18-seat vehicles increases entry costs by a factor of three or more compared to EU countries where one leased 9-seat vehicle is sufficient. Further, this obligation is excessive and discriminatory against small operators. In *Commission v. Spain, C-181/2017*, the EU Court of Justice found that, by requiring operators to have at least three vehicles to obtain public transport licenses, Spain had breached the EU law. In its ruling, the court stated that this requirement was disproportionate and discriminated against small operators.<sup>51</sup> Similarly, the requirement to employ at least three professional drivers increases operating costs by at least EUR 14,400 per year,<sup>52</sup> further deterring companies from entering the market. Finally, the lack of clarity on whether insurance policies or bank guarantee can serve as evidence of financial standing opens room for discretionary behavior on the part of regulators, further deterring companies from entering the market and potentially contributing to rent-seeking behavior.

**Excessive licensing requirements are also likely to deter some providers from formalizing their operations, leading to informality.** Enforcement of key safety and consumer protection regulations is more difficult as informal operators have little incentive to follow formal regulations in general, compromising the policy objectives of licensing. The unregulated informal economy currently accounts for a significant share of the passenger transport market in Serbia, accounting for approximately 35 percent of the total passenger-kilometers in Serbia.<sup>53</sup>

**In line with the challenging licensing environment, firm-level data suggest that newcomers struggle to gain a foothold in the market for passenger transport in Serbia.** Bus firm density in Serbia is almost 80 percent below the EU average (Figure 8). Furthermore, on average, Serbian bus firms are older than their counterparts in benchmark EU countries: In Serbia, 70 percent of operators have been present for more than 20 years (compared to 45 percent in Hungary and 55 percent in the Czech Republic and Slovakia). Finally, Serbia has fewer recent newcomers (firms incorporated after 2011) than all benchmark EU countries except for Romania (Figure 9).

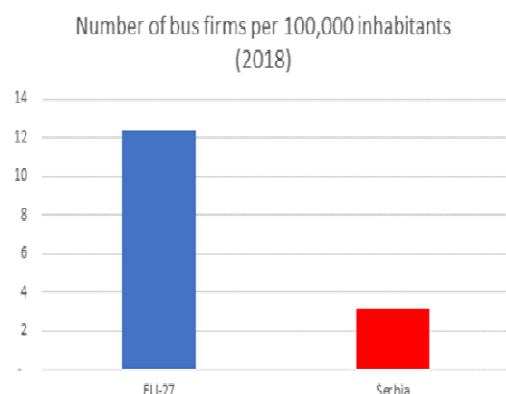
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<sup>51</sup> In its decision, the EU Court of Justice explained that, while it is true that member states can impose additional entry requirements on operators, this does not mean that member states can modify the four key requirements beyond what is stipulated in the regulation. In other words, member states cannot supplement any of the conditions mentioned in the regulation, since these conditions are subject to exhaustive regulation that national legislators can only modify within the limits and in the manner expressly authorized for that purpose by the regulation.

<sup>52</sup> This amount is equivalent to the gross salary (including taxes and social insurance contributions) of three drivers, assuming conservatively that these drivers receive the minimum wage in 2020.

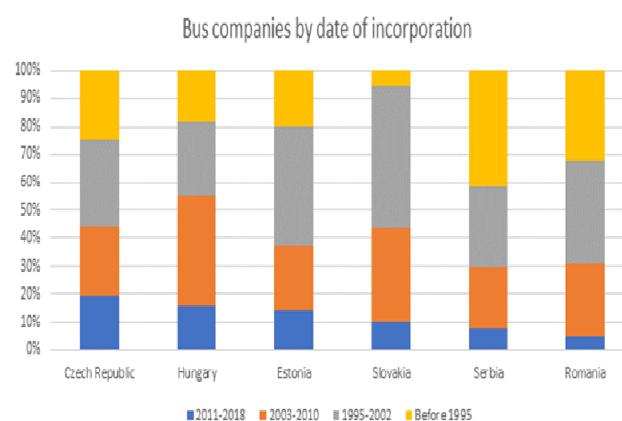
<sup>53</sup> Analysis of the losses for the budget of the Republic of Serbia from the informal economy in passenger road transport, done by the Business Association for Road Traffic "Srbijatransport" in 2015.

Figure 7. Bus firms per 100,000 inhabitants (2018)



Source: World Bank staff analysis of Eurostat data.  
 Note: The chart shows the number of firms active in road transport of passengers (except urban transport). The data corresponds to ISIC Rev. 4 code H4393.

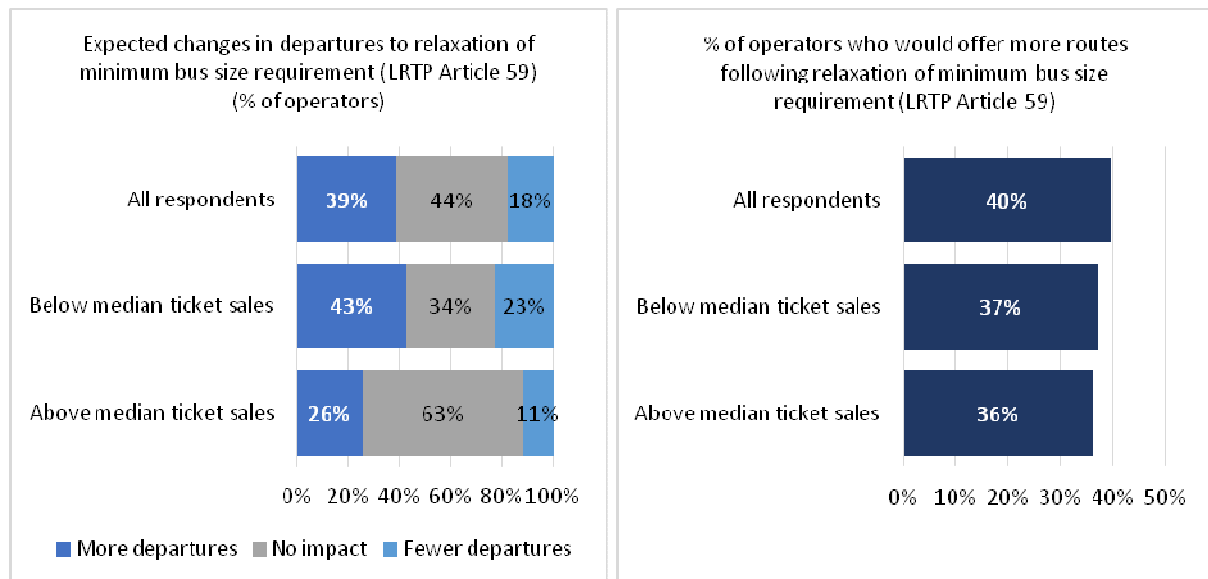
Figure 8. Age of bus firms in operation (2016–2019)



Source: World Bank staff analysis of EMIS data.  
 Note: The chart shows firms active in road transport of passengers (excluding urban transport) in EU countries in which buses account for more than 15 percent of total passenger-kilometers. The data correspond to the 2017 NAICS codes 4852-9. Data are illustrative as database coverage varies across countries. Only firms active between 2016 and 2019 are shown.

**Similarly, smaller firms are disproportionately affected by minimum bus size requirements.** While larger companies are likely to have the scale and brand recognition to fill larger buses, smaller operators with fewer passengers may not break even on a given route or departure unless they are able to use smaller buses. Thus, 43 percent of bus operators with total ticket sales below the market median say that they would offer more departures if minimum bus size requirements were relaxed, compared to 26 percent of operators with above-median ticket sales (Figure 9).

Figure 9. Impact of changes in entry regulation on number of routes and service frequency (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators

Note: Law on Road Transport of Passengers (LRTP) Article 59 minimum bus size is 18 seats; Figure for all respondents may not be between figures for below- and above-median sales due to companies with missing data on ticket sales.

## Alternative

**Fleet and driver requirements could be removed without significant harm to safety.** Technical standards already exist to ensure passenger safety and consumer protection: (a) operators are required to undergo regular vehicle inspections every six months, as well as post-repair inspections, but can also be subject to ad hoc vehicle checks at any time;<sup>54</sup> (b) drivers must hold a Certificate of Professional Competence which entails initial driving qualification and periodic in-service training;<sup>55</sup> (c) there are clear limits on driver's hours that serve to prevent fatigue;<sup>56</sup> (d) vehicles must be fitted with tachographs to record driving times and rest periods.<sup>57</sup> Given these and other regulations, the requirements on minimum fleet size, bus size, and driver counts does not contribute further to safety. Indeed, such licensing requirements may compromise safety by incentivizing operators to stay in the unregulated informal economy, which is not subject to safety regulations. Thus, eliminating excessive licensing requirements would not compromise consumer protection. Doing so would make entry less costly for new entrants and smaller operators and create scope for innovative new services (for example, mini-bus services). In addition, more balanced entry regulations could help shrink the shadow economy: studies have shown that easing product market regulation in developing countries to developing country levels

<sup>54</sup> Section XVI of the Road Transport Safety Act.

<sup>55</sup> Articles 203 and 204 of the Road Transport Safety Act.

<sup>56</sup> Driving time should not exceed 9 hours a day or 56 hours a week. After 4½ hours, drivers must take a break of at least 45 minutes. See Section II of the Act on Drivers' Work Hours in Road Transport and Tachographs.

<sup>57</sup> Section III of the Act on Drivers' Work Hours in Road Transport and Tachographs.

could shrink the informal sector by 7 percent.<sup>58</sup> Thus, the Ministry could consider bringing operator licensing requirements more in line with other EU countries.

**The government could also consider streamlining and clarifying financial requirements for operators.**

The Ministry could explicitly allow for professional liability insurance, bank guarantees, or another binding document proving that the operator has at its disposal the stipulated amounts (for example, a joint and several guarantee for the operator). These documents would provide many operators with a simpler, more cost-efficient way of demonstrating financial standing. The majority of EU member states already allow bank guarantees to serve as proof of financial standing, and allowing insurance is also common.<sup>59</sup>

**2.1.2. Exclusive rights of bus operators**

**Provision of intercity passenger transport is subject to exclusive authorization.** To operate a given intercity connection, bus operators are required to obtain an authorization from the Ministry. The authorization is granted for a single departure or set of departures (timetable) along a certain route and is valid for a period of five years.<sup>60</sup> In domestic transport, the authorization process entails three steps: (a) timetable coordination, (b) timetable certification, and (c) timetable registration. In international transport, the authorization process includes two steps: (a) timetable coordination and (b) an economic viability test.<sup>61</sup>

**For a timetable to be authorized, it first needs to be coordinated with existing timetables.** In domestic transport, coordination of timetables is done once a year<sup>62</sup> whereas in international transport, it is done on demand.<sup>63</sup> Timetable coordination is done for each departure<sup>64</sup> and aims to ensure that the time intervals between newly proposed departures and existing departures (that is, from the previous timetable)<sup>65</sup> at each stop along a shared route<sup>66</sup> are not shorter than the minimum stipulated by law (so-called protection time).<sup>67</sup> In domestic transport, coordination is done only if the newly proposed route

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<sup>58</sup> Regulation and Shadow Economy: Empirical Evidence for 25 OECD-countries, [https://www.researchgate.net/publication/225658388\\_Regulation\\_and\\_shadow\\_economy\\_Empirical\\_evidence\\_for\\_25\\_OECD-countries](https://www.researchgate.net/publication/225658388_Regulation_and_shadow_economy_Empirical_evidence_for_25_OECD-countries).

<sup>59</sup> Ex post evaluation report on implementation of the Regulation EC//1071/2009.

<sup>60</sup> In international transport, the transport permit is issued for a period of up to five years, unless otherwise stipulated in an international agreement. If there is no international agreement in place, permits are issued for a period of one year unless otherwise agreed with the competent authority of the country with which the line is established. See Article 100 of the RPTA.

<sup>61</sup> The economic viability test is performed based on the 2006 Rulebook on the Content of the Feasibility Study of the Establishment of the Line, the Creditworthiness of the Domestic Carrier and on the Manner of Determining the Domestic Carrier for the Establishment of the Line in International Public Passenger Transport, which was enacted based on the former International Road Transport Act. This requirement has been abolished in the new RPTA, but the bylaws have not yet been updated to reflect this regulatory change. According to the Ministry, a new rulebook on authorization of timetables in international passenger transport is to be enacted but this is not yet in the pipeline.

<sup>62</sup> From February to June.

<sup>63</sup> Articles 66 and 104–105 of the RPTA. In practice, the Ministry is facing a five-year delay when it comes to authorizing international timetables, that is, the Ministry is only now processing requests from 2015/2016 due to the lack of capacity.

<sup>64</sup> Coordination is done separately for the outward journey from place A to place B, and the return trip from place B to place A.

<sup>65</sup> Irrespective of whether both connections depart from the same station/stop in the place of departure.

<sup>66</sup> For determining the shared route, all bus stops and stations that are located in the same place shall be considered a single stop/station. Please see Article 8 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>67</sup> In domestic transport, for shared routes up to 30 km, protection time is 15 minutes; for shared routes from 30 km to 60 km, protection time is 30 minutes; for shared routes from 60 km to 80 km, protection time is 45 minutes; for routes from 80 km to 100 km, protection time is 60 minutes; and for shared routes over 100 km, protection time is 75 minutes. In international

overlaps with at least 20 percent of an existing route which is longer than 200 km, or 30 percent of an existing route which is up to 200 km long.<sup>68</sup> For coordination purposes in domestic transport, timetables of the same operator are considered a single timetable if departure and arrival occur within a 45-minute window.<sup>69</sup>

**In domestic intercity transport, the CoC conducts coordination of timetables.** The coordination process is entrusted to a three-member commission, appointed by the CoC President on proposal of the Board of the Group for Intercity Transport and Bus Stations (comprising incumbent operators' representatives). Members of the commission are traffic engineers with minimum five years of experience in public passenger transport and can be the representatives of operators. The commission assesses whether new timetables are prepared in accordance with the law, coordinates new timetables with the old ones, and prepares coordination reports reflecting their decisions. Objections to the coordination report by operators are examined by the board. Representatives of the operator who object and operators about whom objections are raised cannot participate in the work of the board.<sup>70</sup>

**For timetables to be authorized, bus transport operators are required to stop at a bus station if there is one in the place of embarkation/disembarkation.** For international transport, this applies to all stops in the timetable (including transit stops).<sup>71</sup> In domestic transport, this only applies to terminal stops in the timetable.<sup>72</sup> Other conditions also apply, including those regarding the shortest itinerary, driving times, and so on.<sup>73</sup>

**International transport timetables must meet an economic viability test.** The Ministry assesses the economic viability of a timetable based on a feasibility study that is submitted by the operator. This study contains the following: (a) proof of the operator's ability to maintain the route; (b) analysis of the market potential; (c) overview of traffic connections along the route; (d) overview of bus stations/stops on the route; (e) organization of the transport; (f) pricelist, itinerary, and timetable; and (g) business results for the past business year.<sup>74</sup> The economic viability test has been superseded by the new RPTA,

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transport, for routes up to 500 km protection time is 6 hours, and for routes over 500 km, protection time is 8 hours. Please see Article 9 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>68</sup> In other words, if the shared route is insignificant compared to the old timetable route lengthwise (for example, the old timetable route is the route Kruševac-Subotica via Belgrade and Novi Sad—approximately 385 km—whereas the new timetable route/shared route is the route Belgrade–Novi Sad—approximately 95 km), the protection time requirement shall not apply, and the coordination between departures from these timetables will not be required. Consequently, both operators could end up having the same departure times at stations/stops along the shared route. Please see Article 8 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>69</sup> Unless the two timetables constitute a round trip, that is, one timetable is for the outward journey from place A to place B, and the other one for the return journey from place B to place A. Please see Article 10 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>70</sup> CoC Guidance on Procedure for Coordination of Timetables in Intercity Domestic Passenger Transport.

<sup>71</sup> Article 99 of the RPTA. In addition to the bus station, the timetable can foresee stopping at up to two bus stops in the same place.

<sup>72</sup> Article 5 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>73</sup> For example, in domestic transport, the timetable also has to meet conditions regarding (a) terminal dwell time - dwell time at bus stations cannot be longer than 8 minutes for routes up to 50 km and 15 minutes for routes over 50 km and (b) the shortest itinerary in terms of driving times or distance. See Articles 4–8 of the Rulebook on the Timetable Coordination Procedure in Intercity Passenger Transport.

<sup>74</sup> Rulebook on the Content of the Feasibility Study of the Establishment of the Line, the Creditworthiness of the Domestic Carrier and on the Manner of Determining the Domestic Carrier for the Establishment of the Line in International Public

but the bylaws governing the authorization process have not yet been updated to reflect this regulatory change.

**Timetables in domestic and international transport must be registered.** In domestic transport, once the coordination process is over, the Ministry, on request of the operator, certifies and then registers the certified timetable.<sup>75</sup> The operator can start providing services only following such registration.<sup>76</sup> In international transport, the Ministry keeps the register of transport permits that are issued based on previously coordinated timetables.<sup>77</sup> Timetable registration in domestic transport, that is, issuance of a transport permit in international transport, concludes the authorization process.

**Once authorized, 'old' timetables do not go through the coordination process again.** Timetables are authorized (domestic transport) and transport permits issued (international transport) for a period of five years.<sup>78</sup> In both cases, after this period elapses, old timetables must be reauthorized, and transport permits renewed. The reauthorization process does not entail coordination with other timetables. Rather, operators only need to reregister the timetable and request permit renewals, provided that the service was maintained during the preceding authorization validity period.<sup>79</sup>

**Under the current regime, temporary suspension of service is not possible.** In domestic transport, the Ministry will remove a registered timetable/departure from the register if the operator (a) does not begin carrying out the transport within 5 days from the timetable validity date; (b) ceases service in accordance with the timetable for more than 10 days consecutively; (c) ceases service in accordance with the timetable for more than 30 days in total; or (d) embarks/disembarks passengers in a place that is not specified in the timetable more than 5 times in one calendar year.<sup>80</sup> In international transport, the Ministry will revoke a transport permit if the company does not provide service for more than three months.<sup>81</sup>

### Policy objective

**The existing policy aims to safeguard continuity of service.** Granting exclusive rights could help preserve continuity of service because (a) operators may be better incentivized to preserve service on profitable routes where they have exclusive rights and (b) exclusivity is granted on the condition of maintaining service.

**The system which grants exclusive rights to run on select routes or connections is also intended to preserve service on lower-traffic routes.** Operators holding exclusive rights over high-traffic routes or connections—which are generally profitable—can use the rents captured on these routes to cross-

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Passenger Transport. This rulebook was passed on the basis of the former Road Transport Act which was replaced by the RPTA in 2015. The authorization procedure envisaged in this rulebook is not fully harmonized with the RPTA.

<sup>75</sup> Article 65 of the RPTA.

<sup>76</sup> Article 62 of the RPTA.

<sup>77</sup> Article 100 of the RPTA.

<sup>78</sup> In international transport, the transport permit is issued for a period of up to five years, unless otherwise stipulated in an international agreement. If there is no international agreement in place, permits are issued for a period of one year unless otherwise agreed with the competent authority of the country with which the line is established. See Article 100 of the RPTA.

<sup>79</sup> Articles 65 and 109 of the RPTA.

<sup>80</sup> Article 74 of the RPTA. This does not apply in cases of force majeure, road reconstructions, or administrative measures which prevent the operator from providing services. See Article 73 of the RPTA.

<sup>81</sup> Article 114 of the RPTA.

subsidize loss-making feeder routes. Relatedly, an operator may be incentivized to keep a low-traffic feeder route open if it feeds passengers into a profitable monopoly route over which the same operator holds rights: The losses that the operator makes on the low-traffic route may be offset by the extra passenger demand this creates for its profitable high-traffic route.

**Coordination of departures via ‘protection times’ may also prevent the practice of ‘bus wars’ or ‘interloping’.** Interloping happens when a bus operator opportunistically arrives right before a competitor’s scheduled time to poach passengers who are waiting for the competitor’s bus. Such practices have been identified after the deregulation of coach services in the United Kingdom. Interloping may disincentivize bus companies from investing efforts (for example, marketing and communication, and committing capacity to scheduled service) to build up passenger volumes and get passengers to congregate in one place because they may not reap the full benefits of such investments.

### **Potential harm to competition**

**Granting exclusivity via timetable coordination is a form of institutionalized market sharing.** Giving bus operators exclusive rights over certain connections divides the market between operators. Market sharing restricts competition, increases prices in the market, and reduces choice. Indeed, by establishing ‘protection times’ for connections, the system effectively caps the number of departures—and, by extension, the number of operators—on a given connection. Partly as a result, data for 2016 show that approximately 70 percent of domestic intercity routes were serviced by only one operator (see Figure 5 in section 1.4). In addition, when operators are unable to freely schedule their departures, they are precluded from choosing their key strategic variables and adjusting to the market developments, stifling innovation and pro-consumer adjustments.

**Granted exclusivity via timetable coordination could facilitate protection of vested interests.** The CoC administers the coordination process and may use this mechanism to limit entry into the market in two main ways. First, it allows incumbents to decide over the entry and exit of service providers, enabling them to strengthen their own positions and weaken the position of new entrants. Second, the timetable coordination process at the CoC facilitates market sharing and collusion on strategic variables. In the absence of public accountability (no representatives of the Ministry take part in the coordination process), such a system of organized coordination among competitors increases the risk of anti-competitive arrangements.

**Relatedly, grandfathering timetables protects incumbents and limits market dynamism.** While new timetables must be coordinated against the old ones, old timetables are automatically reapproved, giving incumbents privileged access to desirable connections. Grandfathering clauses are included in the RPTA, which does not require previous coordination for old timetables to be reapproved.<sup>82</sup> This rule is consistently implemented in practice, as confirmed by both the Ministry and the operators. Since incumbents’ market positions are protected under the current system, incumbents have less incentive to improve service or costs, and more efficient operators may be prevented from entering.

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<sup>82</sup> Articles 65 and 66 of the RPTA. Old timetables which are expiring only need to be submitted to the Ministry for recertification and reregistration.

## **Alternative**

**The Ministry could consider abolishing the system of exclusive rights over timetables.** Following the example of EU countries, access to the intercity bus market could instead be made through formal nonexclusive authorization where multiple operators may be granted authorization over a given timetable. Alternatively, the Ministry could switch to a system requiring only simple notification of service (as is the case in the UK, Germany, and France), wherein operators need to register their timetables but no authorization is required.

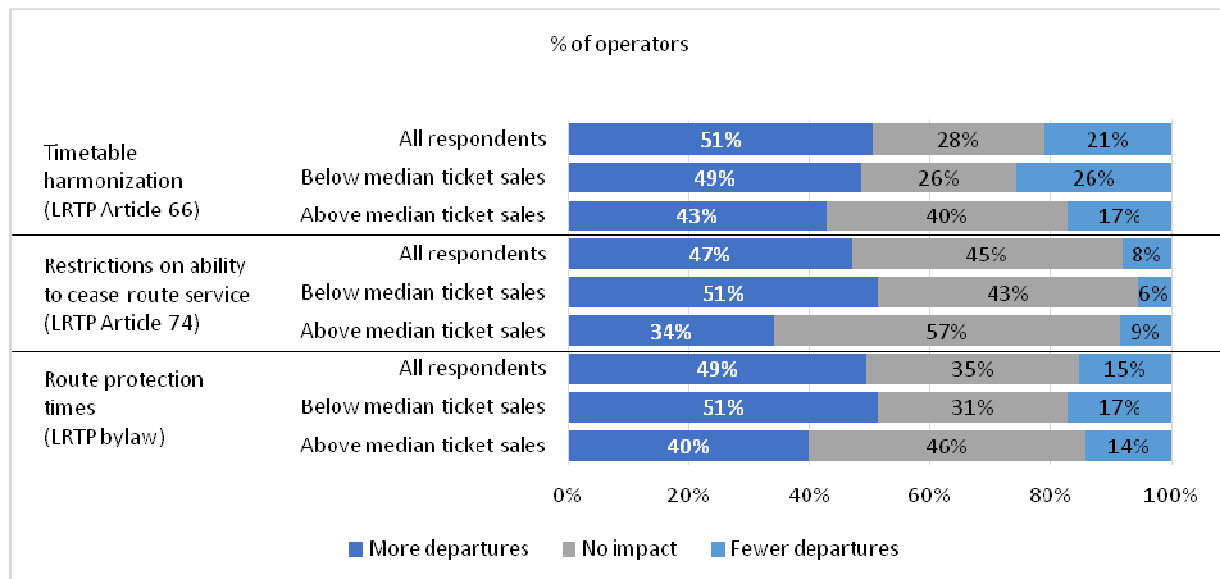
**Removing quantitative restrictions on existing routes would foster new entry, lead to lower fares, and improve services.** Eliminating the system of exclusive authorization would open the door for more competitors to serve a given connection, increasing competition in the market. As such, EU countries which have liberalized their transport markets have generally seen an increase in the number of lines and frequencies, reduced or discounted fares, and improved quality of service (see Table 5 below for a comparative overview). Nearly half of all operators—especially smaller and non-vertically integrated ones—reported that they would increase their services in terms of both routes and frequencies if timetable authorization restrictions were relaxed (Figure 10 and Figure 11).

*Table 5. Market developments following the liberalization of long-distance coach travel*

	Germany	France	United Kingdom	Italy
Type of reforms	Route-level preferences for state-owned incumbent replaced with nonexclusive authorization (2013)	Route-level preferences for state-owned incumbent replaced with nonexclusive authorization (2015)	Authorization of routes, fares, and frequencies replaced with notification (1980)	Automatically renewed route-level concessions replaced with nonexclusive authorizations (2013)
Scope of reform	Routes of at least 50 km	Routes of at least 100 km	Routes of at least 48 km, later 24 km	Connecting three or more regions
Changes in output, prices, and quality				
Output	Increase in number of intercity bus lines by 400% and increase in number of total passengers carried via diversion from rail and new demand (2013–2016)	Increase in number of intercity bus lines by 500% and increase in number of total passengers carried via diversion from rail and new demand by 900% (2015–2019)	Increase in total passengers carried by 50% (1980–1985) via diversion from rail and new demand	Increase in number of intercity bus lines by 33% (2013–2015)
Prices	22% average price reduction from 2012 to 2016, with lower average fares on more competitive routes	Mixed outcomes in terms of ticket prices; price reductions observed on some international routes (for example, Paris–London and Lyon–Torino)	Price reductions by an average of 40% in real terms (1980–1983), especially on major cross-country routes and London-based services	Increase in price variability and discounts (average prices already very low before liberalization)
Quality	Improvement (higher frequency and range of facilities offered on board, for example, easy bike carriage)	Improvement (higher frequency and more comfort)	Improvement (shortening of travel times and better vehicles)	Improvement (higher frequency and innovative selling platforms)
Changes in market structure				
Number of firms	Substantial market entry activity (~350% increase in firm entries), followed by major mergers and acquisitions events in 2015 and 2016 (for example, merger of Flixbus and MeinFernbus and takeover of PostBus by Flixbus)	Five large operators entered the market for domestic passenger transport (some of them were already present on the market for international passenger transport)	Short-lived competition from small independent operators; at least 10 new entrants were able to gain a foothold in the market (1982–1990)	Before liberalization, network was already established with over 45 active operators. After liberalization, two foreign newcomers (Flixbus and Megabus) entered the market and soon developed extensive networks.

	Germany	France	United Kingdom	Italy
Market concentration	In 2016, the lead of the market was taken by Flixbus, whose market share in Germany was 95% in 2018	Eight operators active in the first quarter of 2019, but by mid-2019, two companies emerged as market leaders, forming a national duopoly	Dominant role of incumbent retained (1980–current)	Concentration of the market remains low with several large operators and many medium to small-size operators; evolution toward a national market.
Business models	Emergence of no-frills providers (Megabus in 2015), night bus services, and campus to city transfers for students	Emergence of different models in the price-service quality matrix (for example, premium services) and networks for overnight services	Emergence of no-frills providers (Stagecoach/Megabus in 2003) and direct service to airports (for example, Heathrow)	Emergence of no-frills providers (Megabus); development of consortia to extend the network and improve communication and marketing power
Source	Durr and Huschelrath (2015) Grimaldi, Augustin, and Beria (2017) Gremm and Guihéry (2017) Guihéry (2019) De Haas and Schäfer (2017)	Autorite de Regulation des Transports (2019) Guihéry (2019) Blayac and Bougette (2017)	White and Robbins (2012) Button (1986)	Grimaldi, Augustin, and Beria (2016) Beria, Grimaldi and Laurino (2013)

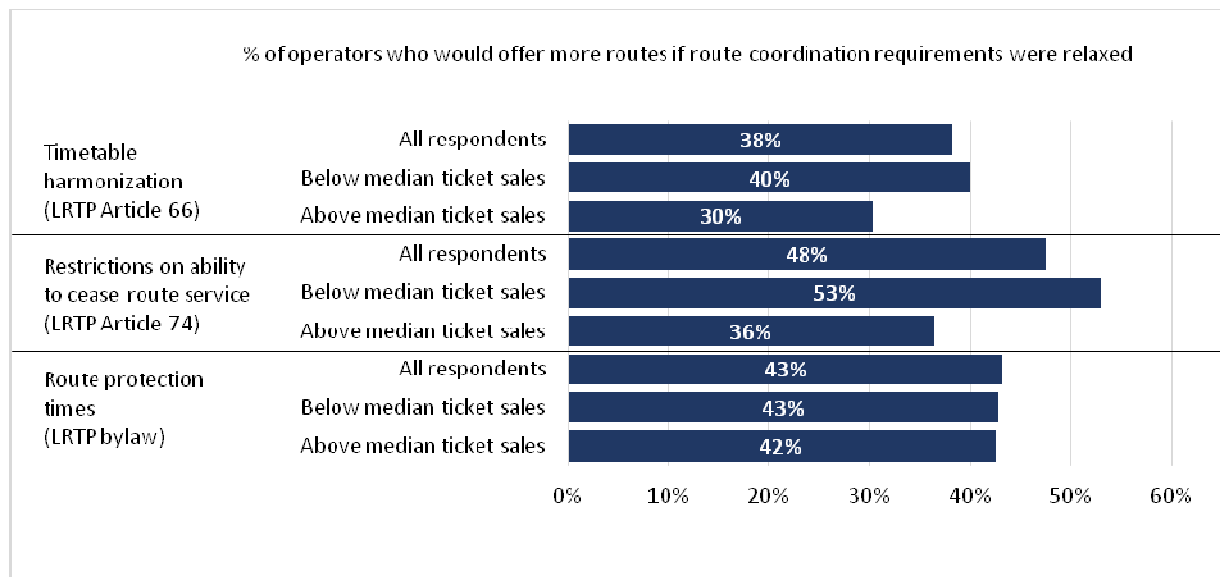
Figure 10. Impact of changes in route authorization on service frequency (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

Note: Figure for all respondents may not be between figures for below- and above-median sales due to companies with missing data on ticket sales.

Figure 11. Impact of changes in route authorization on number of routes (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

Note: Figure for all respondents may not be between figures for below- and above-median sales due to companies with missing data on ticket sales.

**Switching away from exclusive timetable authorization would improve—not harm—access to service for most passengers.** Instead of promoting market access, the current solution harms access for most routes in that it limits the number of connections and operators servicing those routes, resulting in higher fares and lower convenience for passengers. As a result, Serbian bus operators are much more likely to increase route coverage and departure frequency in the event of liberalization (Figure 10 and Figure 11). In addition, the existing system is unnecessary for promoting continuity of service on most interurban routes as these profitable routes would continue being serviced even under the liberalized model, except with lower fares and more frequencies. For example, seven routes in Serbia were compared with comparable routes in reference European countries, such as Croatia, Slovakia, Hungary, Lithuania, or Poland, considering the marginal role of railways in Serbia. Compared with other countries, ticket prices were found to be higher (even in absolute terms) and the number of frequencies lower in Serbia.

**The risk of low-traffic routes being dropped is low and can be addressed with more efficient solutions.** This risk exists on routes that are (a) not profitable by themselves, (b) operated by a single operator, and (c) connected to a profitable monopoly route which is serviced by that same operator. According to the available data, such routes account for less than 7 percent of bus-kilometers traveled in Serbia, meaning expected service losses from eliminating timetable coordination would be low. Furthermore, there are less distortive ways to preserve service on such routes. The current system of granting monopolies on high-traffic routes to preserve low-traffic routes effectively constitutes a tax on passengers of high-traffic routes that benefits the passengers of connected low-traffic routes. Granting monopolies also harms competition and innovation. Instead, insofar as it wishes to preserve service on low-traffic routes, the Government of Serbia could explore providing direct subsidies to operators and/or passengers on such routes. Research on transportation markets has generally found this solution to lead to fewer distortions because it still allows for route-level competition and spreads the cost of subsidization more evenly across all passengers, not just passengers on connected high-traffic routes.<sup>83</sup>

**A lighter form of ‘protection time’ could be retained to prevent opportunistic poaching of passengers (that is, interloping).** Interloping—where a bus company arrives slightly before a competitor’s scheduled service to poach the competitor’s passengers—is only feasible where both the pickup location and destination are the same across competing services. Thus, protection times to prevent this from occurring need not be granted for entire origin-destination pairs (as is currently the case) if there are multiple pickup locations in the origin city (see sections 2.2.1 and 2.2.2 for a detailed discussion on how to allow multiple pickup locations in Serbia). Rather, protection times could be made specific to departures for a given destination from a given pickup location. In addition, the current system could be improved by giving stations the flexibility to choose these protection times themselves—subject to a statutory maximum (for example, 10 minutes)—rather than have the CoC allocate exclusive rights based on prescribed protection times. Stations are better equipped to set appropriate protection times than the CoC because they have more detailed knowledge of individual routes’ dynamics. Stations also have better incentives to set appropriate protection times because they can internalize the tradeoffs between short-term increases in traffic from interloping behavior and the need for investment from bus companies.

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<sup>83</sup> See discussion in Calzada and Fageda(2012)

### **2.1.3. Anti-competitive firm practices**

**Investigations have revealed multiple instances of anti-competitive arrangements in the Serbian intercity bus market.** Since 2009, the CPC has pursued cases against several bus companies for entering into restrictive agreements in the intercity passenger transport market. In 2009, the CPC issued an injunction against five operators<sup>84</sup> active on routes between Serbia and Germany for setting up a pooling system. This arrangement was found to have coordinated services on selected routes, provided for revenue and cost sharing between parties, and allowed for free exchange of confidential information between competitors, eliminating price competition on shared routes. In 2011, the CPC brought similar cases against (a) Lasta and Europa Bus and (b) Jeremić Prevoz and Niš-Ekspres with respect to domestic routes. The CPC found that these competitors had coordinated departures and ticket sales on shared routes and engaged in revenue and cost sharing and price fixing. In the case of Jeremić Prevoz and Niš-Ekspres, the restrictive agreement was found to have increased bus fares. As a result, the CPC imposed fines on Lasta, Europa Bus, and Niš-Ekspres, while Jeremić Prevoz was granted immunity as it had notified the CPC of the agreement.<sup>85</sup>

**Collusive behavior remains a risk in the market.** Like other transport markets, the market for intercity passenger transport is inherently vulnerable to collusion due to multi-market contact (that is, competition along multiple routes) between operators. Such multi-market contact can help sustain collusive arrangements because they allow competitors to retaliate against deviations from collusive behavior along multiple markets, making it riskier for firms to defect from collusive arrangements by offering lower prices. In addition, data on bus connections for the Serbian intercity bus transport market show significant concentration within regions by major competitors. This pattern may simply reflect operators' propensity to offer connections near their geographic bases. However, the relative lack of network overlap between major players and related lack of truly national players is somewhat unusual: For example, Poland has multiple bus companies with national networks. Thus, the regional division of market share may warrant further investigation regarding whether it has resulted from anti-competitive arrangements.

### **Remedies**

**The Government of Serbia has responded to recent antitrust cases by prohibiting joint service provision on domestic intercity routes and could consider extending this to international transport.** Under the Road Transport Act,<sup>86</sup> the predecessor of the RPTA, bus companies were allowed to enter into joint transport agreements for operation of intercity bus routes.<sup>87</sup> In practice, these arrangements often enabled timetable coordination between competitors in an opaque, sometimes anti-competitive manner.<sup>88</sup> In response, the RPTA explicitly prohibited these agreements in domestic transport and stipulated that a timetable be registered and serviced by only one operator.<sup>89</sup> However, joint operation

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<sup>84</sup> Panonijabus, Vojvodina, Lasta, Sevetrans, and Niš-Ekspres.

<sup>85</sup> CPC. More information available at <https://www.kzk.org.rs/>.

<sup>86</sup> Official Gazette of the RS No. 46/95, 66/2001, 61/2005, 91/2005, 62/2006, 31/2011 and 68/2015.

<sup>87</sup> Article 16 of the Road Transport Act.

<sup>88</sup> RPTA Explanatory Memorandum.

<sup>89</sup> Articles 62 and 64 of the RPTA.

of connections is still allowed in international transport,<sup>90</sup> increasing the risk of collusion between competitors. To mitigate this risk, the Government of Serbia could consider extending the RPTA's prohibition of joint transport agreements to international routes.

**Building on this measure, the Government of Serbia could consider limiting the coordination of timetables.** The ban on joint transport agreements for domestic transport did not fully eradicate the potential for collusion. As discussed in section 2.1.2, timetable coordination through the CoC increases the risk of collusion, protection of vested interests, and market sharing. Thus, the Government could consider switching to a nonexclusive notification-based model for route operation and explore limited subsidies for routes at risk of being abandoned under this arrangement. This would facilitate the entry of new firms, put competitive pressure on the existing operators, and make collusion more difficult while still ensuring service on lower-traffic routes.

**In addition, the CPC should monitor the market closely.** The risk of anti-competitive behavior—including cartelization—remains high given the industry's historical track record of collusive arrangements, the somewhat unusual division of the market between competitors, and a regulatory model that increases the risk of collusion. Customers are rarely in a position to directly detect cartel behavior despite the harm they face from it. Thus, the CPC should consider intensifying enforcement by closely monitoring the behavior of market players—especially leading players—and investigating any signs of collusion. Increased scrutiny and strong sanctions for anti-competitive conduct are among the most effective antitrust enforcement tools and a powerful deterrent.<sup>91</sup>

## **2.2. Bus station services**

**There are three key barriers to competition on the market for bus station services.** First, station operators in Serbia enjoy market exclusivity, which is predicated on two key factors: (a) buses are mandated to stop at bus stations and (b) bus stations are the only stopping points that allow for longer dwell time and, consequently, guaranteed departure times. These factors significantly reduce competitive pressure, leading to higher fees and lower quality of bus station services. Second, the only alternatives to bus stations—intercity bus stops—are designated only by official initiatives by local governments. This reduces the ability of operators to define their routes and encourages firms to engage in untransparent lobbying. Third, bus stations have been found to abuse their dominant positions, most notably by discriminating against unaffiliated bus firms as well as direct ticket sales. Several competition cases revealed that these and other abusive practices have harmed travelers and bus companies, resulting in higher prices and lower quality of service. Each of these three barriers is presented in more detail in the following sections.

### **2.2.1. Exclusivity of bus stations**

**Bus stations are the only places at which buses can stop for longer periods to embark and disembark passengers.** Station exclusivity is predicated on two government mandates: (a) buses are required to use and stop at bus stations<sup>92</sup> and (b) buses are not allowed to dwell outside bus stations for extended

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<sup>90</sup> Article 101 of the RPTA.

<sup>91</sup> UK Competition and Markets Authority, 2017.

<sup>92</sup> Article 66 of the RPTA (domestic intercity transport) and Article 99 of the RPTA (international intercity transport).

periods.<sup>93</sup> In domestic transport, bus operators must begin or terminate service at a bus station if there is one in the place of departure/arrival. Buses traveling abroad are additionally required to call at stations in cities that are transit stops.<sup>94</sup> Bus stations are also the only locations in which buses can stop for longer periods. While passengers can (dis)embark at minor bus stops, such as city bus stops or parking lots, they are not allowed to dwell in these locations. The maximum dwell time at minor bus stops is not clearly defined by the law, but stops of more than 3 minutes can be fined.<sup>95</sup> Bus stations are privately owned and primarily controlled by major bus operators.

### **Policy objective**

**The mandatory use of bus stations is intended to promote social inclusion, safety, and ease of travel.**

In contrast to bus stops, bus stations are required to meet strict requirements and accommodate people with motor, sensory, or intellectual impairment. For instance, stations are required to provide seats for people with disabilities, make audio announcements, and maintain information desks and information boards. Other station amenities such as waiting rooms, public toilets, and surveillance systems are prescribed to increase comfort and passenger safety. Exclusivity also reinforces network economies and supports the position of stations as connection hubs that make it easier for passengers to transfer between buses.

### **Potential harm to competition**

**The exclusivity of bus stations strengthens their market power; this may lead to higher fees and lower-quality service.** Due to the network character of transport services and due to relatively high up-front costs, station providers have natural market power over transport companies and passengers. In Serbia, the market power of bus station owners is reinforced by the fact that bus operators are obligated to use their services. The combination of network economies and sector regulations have led to a situation in which there is usually only one station in a city which according to market participants meets the existing demand. This, however, dampens the incentives of operators to improve service quality and price services competitively. As a result, bus station charges are high in Serbia, and higher than in three other European countries for which the World Bank collected data (Table 6). In Serbia, stations also charge passengers service fees (including a platform fee) and a commission. This is very different from the situation in EU countries, where stations primarily finance services through ticket commissions and service fees paid by bus companies.

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<sup>93</sup> Road Traffic Safety Act: 'Stopping' is defined as bringing the vehicle to a stop on the road for a period of up to 3 minutes, without the driver leaving the vehicle (Article 7); 'Parking' is defined as any other case of bringing the vehicle to a stop (that is, stopping and leaving the vehicle or stopping for a longer period without leaving the vehicle) (Article 7)

<sup>94</sup> Article 99 of the RPTA.

<sup>95</sup> Road Traffic Safety Act defines 'stopping' as every instance of bringing a vehicle to a stop which lasts up to 3 minutes

Table 6. Station fees in Serbia and selected EU countries (2019)

Serbia			EU		
City	Typical fee per bus	Additional information	City	Typical fee per bus	Additional information
Belgrade	EUR 27.7	Includes <ul style="list-style-type: none"> <li>• Station fee of EUR 5.7 per bus,</li> <li>• Passenger service fee of EUR 15.6 (EUR 0.78 per person), and</li> <li>• Ticket commission of EUR 6.4.</li> </ul>	Berlin, Germany	EUR 15.5	<ul style="list-style-type: none"> <li>• Fees vary by time; Monday to Saturday, 6–9 a.m. or 5–8 p.m., the fee is EUR 13 per bus.</li> <li>• In addition, up to 7 hours of parking cost EUR 7 per bus.</li> </ul>
Novi Sad	EUR 18.3 per bus	Includes <ul style="list-style-type: none"> <li>• Station fee of EUR 3.4 per bus,</li> <li>• Passenger service fee of EUR 8.5 (EUR 0.4 per person), and</li> <li>• Ticket commission of EUR 6.4.</li> </ul>	Warsaw, Poland	EUR 1.5–12	<ul style="list-style-type: none"> <li>• Lower bound is for buses up to 17 seats on domestic connections.</li> <li>• Upper bound is for buses on international connections.</li> <li>• Volume discounts are up to 8%.</li> <li>• In addition, parking fee is EUR 1 per hour</li> </ul>
Požarevac	EUR 18.6 per bus	Includes: <ul style="list-style-type: none"> <li>• Station fee of EUR 5.1 per bus,</li> <li>• Passenger service fee of EUR 7.1 (EUR 0.35 per passenger), and</li> <li>• Ticket commission of EUR 6.4.</li> </ul>	Kraków, Poland	EUR 3.5–6	<ul style="list-style-type: none"> <li>• Lower bound is for buses up to 40 seats on domestic connections.</li> <li>• Upper bound is for buses on international connections.</li> <li>• Volume discounts are up to EUR 1.2.</li> <li>• Additionally, 8% commission, no ticket sales on bus but online tickets accepted.</li> </ul>
			Wrocław, Poland	EUR 5–8.5	<ul style="list-style-type: none"> <li>• Lower bound is for domestic connections.</li> <li>• Upper bound is for international connections.</li> <li>• In addition, 1 hour parking costs are EUR 25 per bus.</li> </ul>
			Bratislava, Slovakia	EUR 3–8.3	<ul style="list-style-type: none"> <li>• Lower bound is for local buses.</li> <li>• Upper bound is for buses on intercity and international routes.</li> <li>• EUR 5.4 extra fee is for cash payments on platform.</li> </ul>

Serbia		
City	Typical fee per bus	Additional information

EU		
City	Typical fee per bus	Additional information
Poprad, Slovakia	EUR 2.7–6.6	<ul style="list-style-type: none"> <li>• Lower bound is for buses on domestic connections.</li> <li>• Upper bound is for buses on international connections.</li> <li>• The fee for intercity buses is EUR 4 per bus.</li> <li>• In addition, 1 hour parking costs are EUR 1 per bus.</li> </ul>
Kežmarok, Slovakia	EUR 2	<ul style="list-style-type: none"> <li>• In addition, 1 hour parking costs are EUR 1 per bus.</li> </ul>

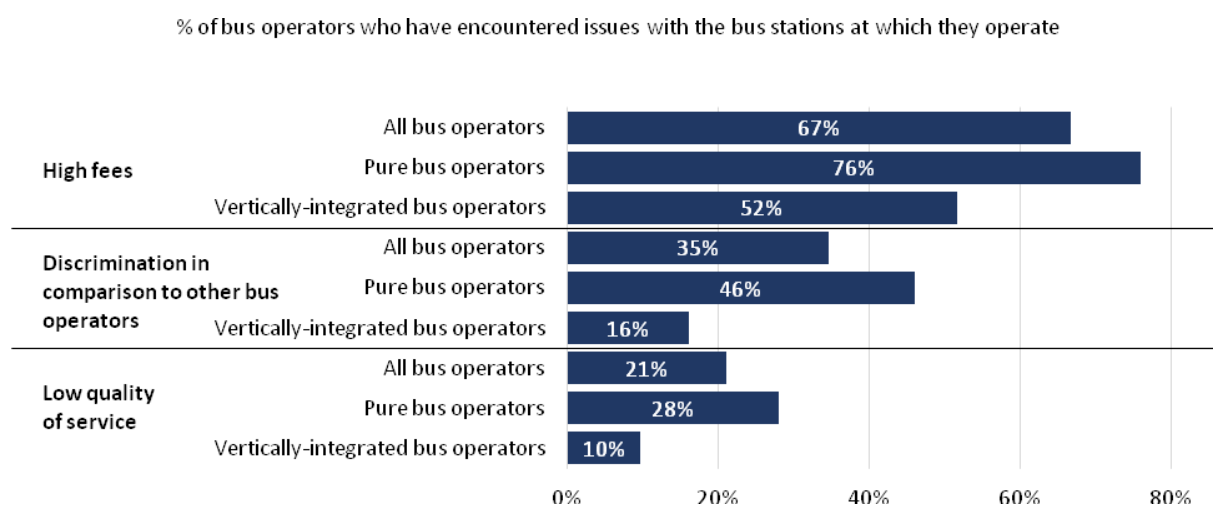
Source: World Bank staff analysis based on publicly available information and interviews with market participants.

Note: Fees exclude value added tax (VAT). Since bus stations in Serbia charge passengers directly, the total fees given for Serbia also include commissions and other fees paid by passengers, assuming for each bus over-the-counter sales of 20 tickets per bus, 9 percent commission, and average prices of RSD 500 per ticket.

**Vertically integrated bus stations can abuse market power by discriminating against unaffiliated bus companies.** Abuse of dominance by station operators has been confirmed in several cases handled by the CPC.<sup>96</sup> These cases concern bus operators who are also bus station operators. Such vertically integrated firms have discriminated against unaffiliated bus operators by charging them higher prices and restricting the use of tickets that were bought outside the bus station. Data collected by the CPC and the WBG for this market study indicate that over one-third of bus operators are vertically integrated—and more than two-thirds of all station operators. The same data also confirm that bus operators, particularly operators that are not affiliated with bus stations, are dissatisfied with the pricing or the quality of services provided at stations (Figure 12).

<sup>96</sup> Autoprevoz-Janjusević - decision number 5/0-01-488/2020-1; Niš-Ekspres - decision number 5/0-02-290/2020-3; BAS - decision number 5/0-02-117/07-1; Inter Turs Plus - decision number 5/0-02-90/2017-131; Sirmiumbus - decision number 5/0-02-581/2017-1 and market test notice number 5/0-02-52/2018-5; and JP Novi Autoprevoz - decision number 5/0-02-354/2019-1 and market test notice number 5/0-02-354/2019-9.

Figure 12. Satisfaction with bus station services in Serbia (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

Note: The percentages in this chart denote the percentage of bus operators that have experienced issues with the service provided by bus stations as described in the bolded text. Three separate bars are displayed: one for all bus operators (that is, the full sample), one for 'pure bus operators' (that is, bus operators that are not affiliated with bus stations), and one for 'vertically-integrated bus operators' (that is, bus operators that are affiliated with bus station operators).

## Alternative

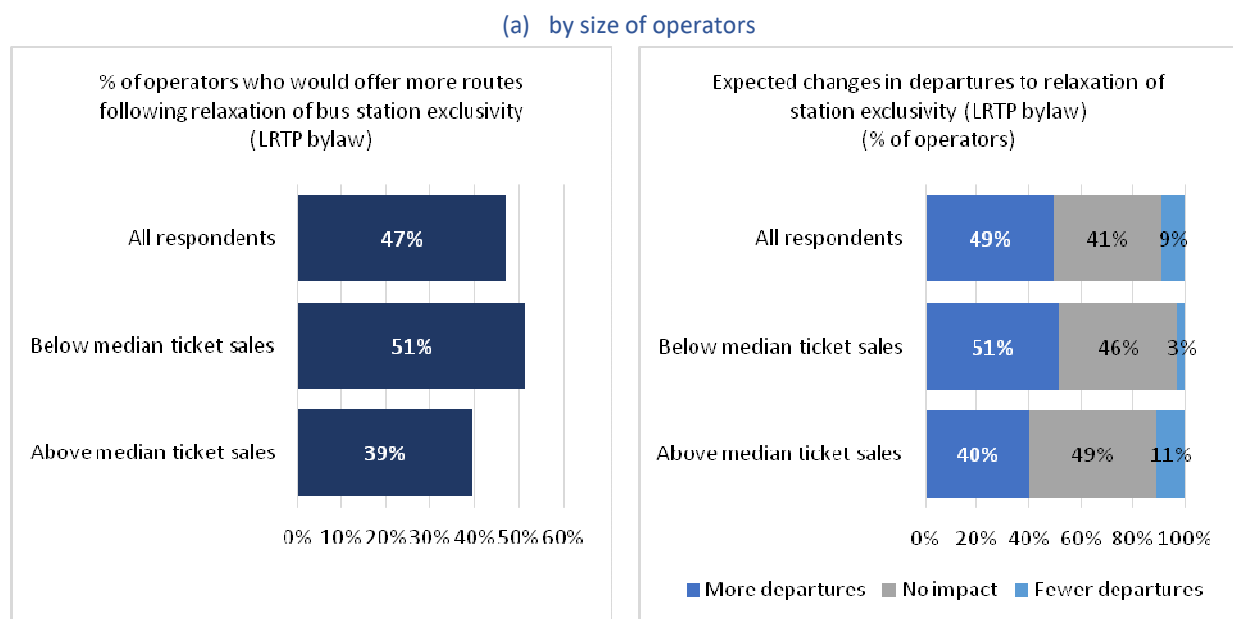
**Bus service safety, inclusivity and ease of travel may be achieved through less distortive means than exclusivity.** The RPTA and its bylaws could be amended to facilitate the opening of 'basic' bus stations that would be subject to lighter technical requirements than 'regular' bus stations. Currently, bus stations are required to have an office building, waiting room, luggage storage room, ticket and information counters, heating/air conditioning, public toilets, and an area with bus platforms.<sup>97</sup> To ensure safety and inclusivity, basic bus stations could be required to fulfill some but not all such criteria. For instance, they could be also required to have a covered area with platforms, travel information boards/screens, public toilets, ticket counters, and adequate lighting. Inclusivity could be directly enforced through accessibility specifications for buses and coaches and on-board PRM (Passengers with Reduced Mobility) assistance. Ease of travel, on the other hand, may be disrupted in the short run, particularly interconnections; however, travel convenience (or inconvenience) could be priced by market demand. Moreover, ease of travel could improve through complementary solutions such as real-time information systems using global positioning system (GPS).

<sup>97</sup> Article 3 of the Rulebook on traffic-technical and other conditions for construction, maintenance and operation of bus stations (Official Gazette of the Republic of Serbia, No. 7/17), in connection with the Rulebook on categorization of bus stations (Official Gazette of the Republic of Serbia, No. 109/20).

**Basic bus stations could be placed on the same legal footing as bus stations**, that is, it would become possible to use them as terminal stops in domestic transport and sole transit stops in international transport. A similar categorization of stopping points exists in Slovenia—apart from bus stations and bus stops, there are also ‘important bus stops’ that offer basic station services and, unlike bus stations, do not need to have an indoor waiting area.<sup>98</sup>

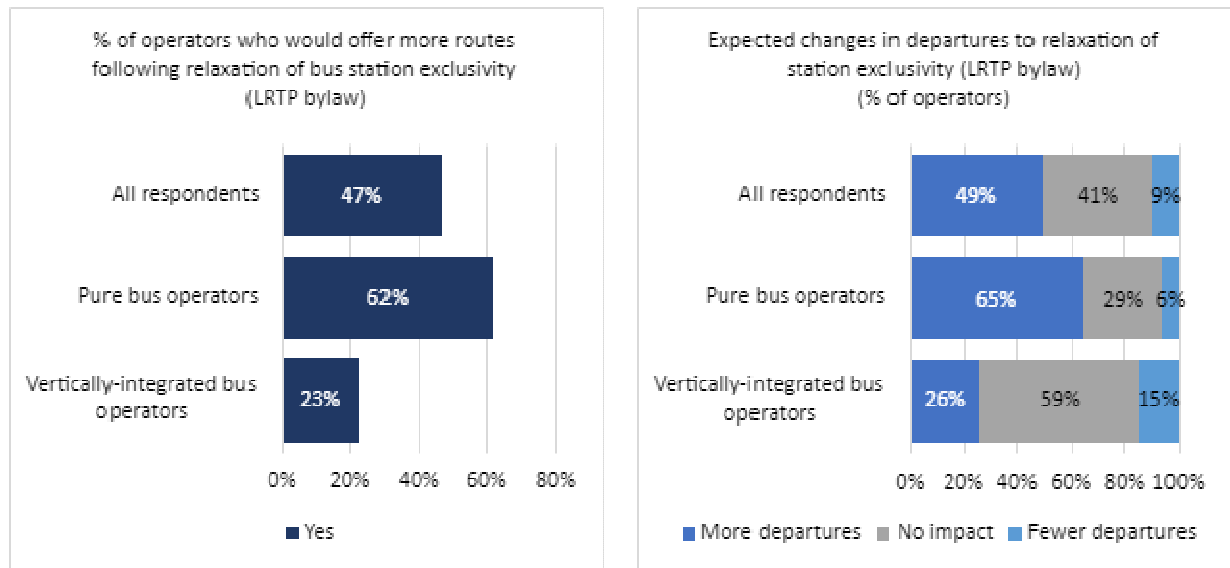
**Allowing basic bus stations would also improve market functioning.** As new bus stations would emerge based on market demand, existing stations would face competitive pressure to lower fees and improve services. The reduction in terminal fees may eventually be passed through to consumers. Bus operators could also expand services and route offerings. According to data collected by the WBG and the CPC, around half of the bus operators would offer more departures and operate more routes if exclusivity of bus stations was relaxed. This impact would be more pronounced in the case of smaller and non-vertically integrated operators (Figure 13). Through the introduction of new bus stations, bus companies would be incentivized to develop more efficient business models to serve their customers’ preferences more efficiently. This mechanism driving product differentiation and consumer choice would be accelerated through greater private sector interest due the low costs associated with basic bus stations.

*Figure 13. Impact of changes in bus station regulation on routes and service frequency (2019)*



<sup>98</sup> Articles 2-10 of the Rulebook on equipment of bus stations, major bus stops and bus stops and the manner of providing bus station services (Official Gazette of the Republic of Slovenia, No. 86/04 and 131/06 - ZPCP-2).

(b) by type of operators



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

Note: Figure for all respondents may not be between figures for below- and above-median sales due to companies with missing data on ticket sales.

### 2.2.2. Designation of intercity bus stops only by official initiative

**Intercity bus stops are not mandated by operators and passenger demand but instead determined only by official initiative.** Bus operators can embark/disembark passengers either at bus stations or at intercity bus stops that are designated by local authorities and approved by the Ministry.<sup>99</sup> The RPTA and its bylaws do not regulate the procedure of setting up intercity bus stops nor do they envisage the right of operators to request the setting up of new intercity bus stops. These procedures generally are also not regulated at the local level.

#### Harm to competition

**Designating bus stops by official initiative reduces the ability of bus operators to manage their strategic assets and diversify their services.** Formally, bus operators have no means to propose new bus stops. The procedures for establishing new stops, which municipalities follow, are opaque and vary across jurisdictions. As a result, bus operators are hindered in their ability to adjust their services and develop their network. In practice, bus operators either resort to using existing bus stations and bus stops or they lobby local governments to designate new stops. The informal character of this procedure may distort the level playing field, and it may accord operators that have more resources an advantage over their competitors.

<sup>99</sup> Articles 2, 60, and 70 of the RPTA. See also Article 3 of the General Conditions of Intercity Transport.

## Alternative

**The process for designating new intercity bus stops could be clearly defined in the law.** Bus operators could be allowed to request new bus stops, through a mechanism laid out by the RPTA or its bylaws. Municipalities would review these requests within a prespecified time frame and consider their implications for safety and level of service.

**The procedures for designating new bus stops have been already formalized in other European countries.** For instance, in Slovenia, bus operators can file a request for placing a new bus stop at a specific location. This request is submitted to the competent road authority, which deliberates and makes a decision based on the following considerations: (a) passenger transport needs, (b) network of bus connections and stops in the area, and (c) technical conditions.<sup>100</sup> Such a policy would allow bus companies to adapt their itineraries and networks. Bus operators could, for instance, (de)board passengers at parking lots or other alternative stops which allow for longer dwelling times and safe (dis)embarkation.

### 2.2.3. Anti-competitive firm practices

**Bus companies have been repeatedly found to discriminate against their rivals by restricting access to bus stations.** As of 2007, the CPC has handled cases against several station operators for suspected abuse of market dominance. Abusive practices were confirmed and fines imposed in three cases, while two cases are still pending. The CPC found that station operators were abusing their dominance by discriminating against different modes of ticket sales, charging excessive prices of station use by nonaffiliated firms, and applying discriminatory pricing by route type. A summary of these cases is presented in Table 7. In a number of these cases, bus station operators agreed voluntarily to cease potential anti-competitive practices. The remaining complaints did not result in the launch of formal proceedings as they were not directly linked to potential anti-competitive conduct.<sup>101</sup>

*Table 7. Abuse of dominance cases against station operators*

Type of case	Details	CPC response
Discrimination against electronic and direct ticketing (2007 and 2020)	In the case of BAS, the bus station operator in Belgrade, the CPC found that higher platform access fees applied to passengers who did not buy their tickets at station counters compared to those who did. Similar practices were confirmed at bus stations in Niš, where higher fees also applied to persons accompanying passengers to the station platforms and passengers travelling with bus companies that refused to sell their tickets at Niš station.	Fines imposed on operator
Charging excessive prices (2017)	In the case of Inter Turs Plus, a bus company and the operator of the bus station in Topola, station fees were found to be above the competitive levels, which led to an increase in prices of bus tickets and cancellation of connections stopping at Topola bus station.	Fines imposed on operator and requirement for revised cost-based pricing <sup>102</sup>

<sup>100</sup> Article 5 of the Slovenian Rulebook on Bus Stops (Official Gazette of the Republic of Slovenia, No. 106/11 and 36/18).

<sup>101</sup> Some complaints have been withdrawn, while the CPC had no jurisdiction over some of the other cases.

<sup>102</sup> The Commission imposed around EUR 2,000 fine on Inter Turs Plus d.o.o. and ordered the operator to issue a new cost-based pricelist for services provided to passengers and bus companies.

Type of case	Details	CPC response
Discrimination based on travel distance/route (2020 and 2018)	In the case of Niš Ekspres and Sirmiumbus, bus companies and bus station operators in Niš and Sremska Mitrovica, the CPC found that passenger fees varied depending on travel distance and/or travelled route.	Fines imposed on operator and requirements for single platform access fee; commitment decision <sup>103</sup>
Discrimination based on type of travel or operator (2019)	CPC initiated a case against JP Novi Autoprevoz, a bus company and the bus station operator in Vrnjačka Banja, suspecting that it was charging passengers different fees depending on the operator, as well as different fees for urban/suburban, interurban, and international travel.	Commitment decision <sup>104</sup>
Discrimination against unaffiliated bus companies (2020)	CPC initiated a case against Autoprevoz-Janjusević, a bus company and the bus station operator in Kragujevac, suspecting that the operator is charging dispatch fees for all buses except its own.	Pending

Source: CPC.<sup>105</sup>

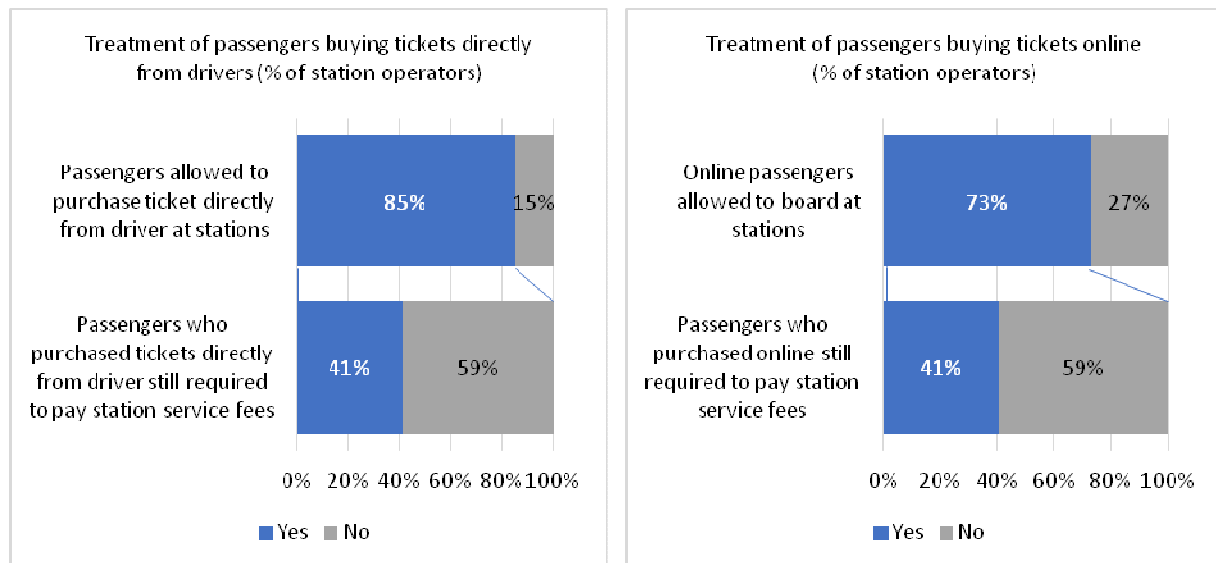
**Some station operators encourage over-the-counter sales in favor of online sales and sales by bus drivers.** Passengers in Serbia still face difficulties buying tickets online or directly from the bus driver. Although the RPTA allows sale of bus tickets via the internet and on board, it does not expressly require bus stations to accept tickets bought outside stations. According to data collected by the WBG and the CPC, 15 percent of stations do not allow passengers to purchase tickets directly from drivers, and 27 percent of stations prohibit passengers to board buses with an electronic ticket. Among station operators that allow passengers to purchase tickets through non-station channels, 41 percent place additional charges for station fees in such cases (Figure 14). There is no explicit regulation on ticketing.

<sup>103</sup> In the case of Niš Ekspres, the CPC imposed a fine of around EUR 320,000 on the operator and ordered a single platform access fee for all persons accessing station platforms, regardless of the travel distance, route, or reason for accessing the platform. In the case of Sirmiumbus, the CPC issued a commitment decision (form of negotiated termination of antitrust cases) based on voluntary commitments offered by Sirmiumbus, by which the operator undertook to (a) set a single access fee for all persons wishing to access station platforms and (b) charge dispatch fees based on dwell time at the station (and not travel distance and/or route).

<sup>104</sup> The CPC accepted voluntary commitments offered by JP Novi Autoprevoz, by which the operator undertook to (a) set a single access fee for all persons wishing to access station platforms, (b) charge dispatch fees based on dwell time at the station, and (c) set a single parking fee for all vehicles using the station parking lots.

<sup>105</sup> Autoprevoz-Janjusević - decision number 5/0-01-488/2020-1; Niš Ekspres - decision number 5/0-02-290/2020-3; BAS - decision number 5/0-02-117/07-1; Inter Turs Plus - decision number 5/0-02-90/2017-131; Sirmiumbus - decision number 5/0-02-581/2017-1 and market test notice number 5/0-02-52/2018-5; and JP Novi Autoprevoz - decision number 5/0-02-354/2019-1 and market test notice number 5/0-02-354/2019-9.

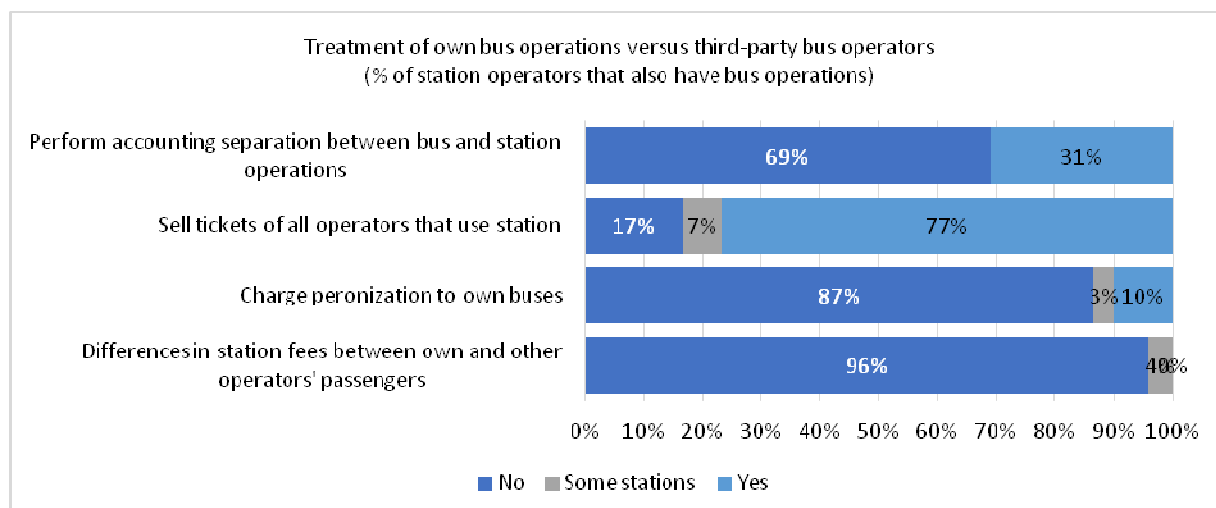
Figure 14. Discrimination against direct ticket sales in Serbia (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

**Bus stations use their position to discriminate against unaffiliated firms through station fees.** According to data collected jointly with the CPC some station operators treat own bus operations more favorably compared to third-party operations. According to the data, 13 percent of station operators confirmed that they do not charge dispatch fees for their own buses, while 4 percent of station operators charge different fees to own and other operators' passengers. In practice, it is possible that price discrimination is more prominent—almost 70 percent of affiliated station operators do not perform accounting separation between bus and station operations, which reduces transparency and further strengthens the position of those operators versus their rivals (Figure 15).

Figure 15. Discrimination against third-party bus operators in Serbia (2019)



Source: WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

Note: Figures for the last row on 'differences in station fees between own and other operators' passengers' are in terms of percent of station operators who charge station fees at all.

## Remedies

**Measures aimed at controlling station prices, such as maximum station fee regulation, have already been introduced by the RPTA to minimize discrimination.** Station operators are obliged to charge for their services in accordance with the category of their bus station. Bus stations are categorized in accordance with the rulebook on categorization of bus stations<sup>106</sup> on the basis of predefined criteria.<sup>107</sup> Maximum station fees are determined by the Government of Serbia and correspond to the category of bus station.<sup>108</sup> However, the regulation on maximum rates of station fees has not yet been implemented. For this reason, station fees are currently being determined freely by bus station operators. In Vojvodina, station operators voluntarily entered into an agreement that established the same fees across the region.<sup>109</sup>

**In the absence of other regulatory changes, maximum price regulation is an option for improving competition in the market.** If the Ministry opts for the capping of station fees to minimize abusive practices by station operators, such maximum price regulation should, among others, (a) catalog in a comprehensive manner the services provided by bus stations so as to avoid novel and discretionary charges for nonregulated services; (b) be based primarily on parameters that are cost-based, such as bus size (number of passengers or weight), travel distance (long-distance passengers typically use more station facilities), and/or dwell time at the stations but also consider other relevant factors, such as station facilities, traffic flow, and so on; and (c) be transparent and nondiscriminatory.

**Internationally, station fees are subject to light regulatory requirements.** For example, France has opted for a simple model of station fee regulation. Under this model, (a) station fees have to be transparent, nondiscriminatory, objective, and notified to the regulator Autorité de Régulation des Activités Ferroviaires (ARAFER)<sup>110</sup>; (b) station fees are capped to the amount of costs incurred from provision of station services, increased for a reasonable return on investment in the sector; and (c) not all costs are considered justified and recoverable—to avoid inflation of costs and station fees, a simple typology of costs and methodology for their proper allocation to various revenue sources has been introduced. However, even under this simple model, station fee regulation requires high capacity from both ARAFER (reporting and ad hoc controls) and operators (accounting separation). On a similar note, in the case of train stations, which enjoy a market power comparable to the one of bus stations, rules on

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<sup>106</sup> Enacted by the CoC in August 2020.

<sup>107</sup> Basic criteria include (a) number of inhabitants in the place where the station is located, (b) station capacity (number of platforms, waiting area surface, number of counters, and so on), and (c) mode of operation (work hours, provision of transport information, security, and so on). Additional criteria include (a) capacity to provide optional services to bus companies/passengers (such as vehicle inspection, parking, restaurants, travel agency services, and so on) and (b) competitiveness on the market (for example, number of bus/rail stations in the same area).

<sup>108</sup> Article 49 of the RPTA.

<sup>109</sup> Minutes from the meeting of the Working Group for the Regulation on maximum rates of station fees held at the Ministry on July 28, 2020.

<sup>110</sup> Article L. 3114-5 of the French Transport Code – [Decision No. 2017-116 of October 4, 2017 governing pricing policies, capacity allocation procedures and accounting rules for road transport facilities.](#)

fees are very light. For instance, train station operators in Germany are only required to obey three key principles—transparency, nondiscrimination, and fairness—when setting their fees.<sup>111</sup>

**Capping station fees, however, is only a second-best solution, and changes to the exclusivity of bus station would be preferable.** Setting maximum prices fails to incentivize station operators to improve services and does not eliminate the problems of operator, route, and ticketing discrimination. Further, this approach is coupled with difficulties in setting an appropriate maximum price level based on station amenities. While for some stations maximum fees may be too high (for example, cases of high traffic), for others, they may be too low (for example, cases of modern station halls constructed in the 1970s and 1980s). As a result, a bus station may shut down, limit services, or repurpose/sell property. The first-best solution would be to abolish the exclusivity of bus stations as terminal points (and transit points in international transport) and allow buses to stop at other points at which they can dwell for longer periods to embark passengers (for example, basic bus stations, parking lots, or suburban terminals). Bus stations would then feel a competitive pressure to offer good services at reasonable prices.

**Complementary solutions to minimize stations' incentives for discrimination and enhance competitive pressure could be considered.** Bus stations could be mandated to accept electronic tickets and allow passengers to purchase tickets directly from the driver. Such an obligation could be foreseen in the RPTA. This would increase competition between various ticket sale channels and certainty for travelers who buy their tickets online. It would further promote e-ticketing solutions and, ultimately, improve traveler choice. Following France's example,<sup>112</sup> Serbia could also introduce mandatory accounting separation for station operators. This measure could increase transparency and reduce incentives for price discrimination against third-party operations.

## **2.3. Ancillary services**

### **2.3.1. Access to data**

**Information about intercity connections is available online but is incomplete.** Unlike some EU countries,<sup>113</sup> reliable and comprehensive information on intercity bus connections in Serbia is not available online, through neither public authorities nor private providers. The most reliable schedule information is available through two regulatory authorities, the Ministry and the CoC, covering international and domestic connections, respectively. These sources cover route and timetable information; however, they exclude pricing of fares. Fare information can be accessed for a handful of private operators on their respective websites or via online ticketing platforms, but data gaps limit comparability between operator-route pairs.

**Moreover, timetable and fare information is not regularly updated, lacking reliability and uniformity across sources.** Data on cancelled and suspended departures or changes to existing timetables are not systematically updated by the Ministry and the CoC. Between 2012 and 2016, the CoC uploaded data on intercity connections to a searchable online database; however, due to lack of resources, this practice was abandoned and replaced with infrequently updated non-machine-readable timetables. For

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<sup>111</sup> Article 32 of the German Railway Regulation Code.

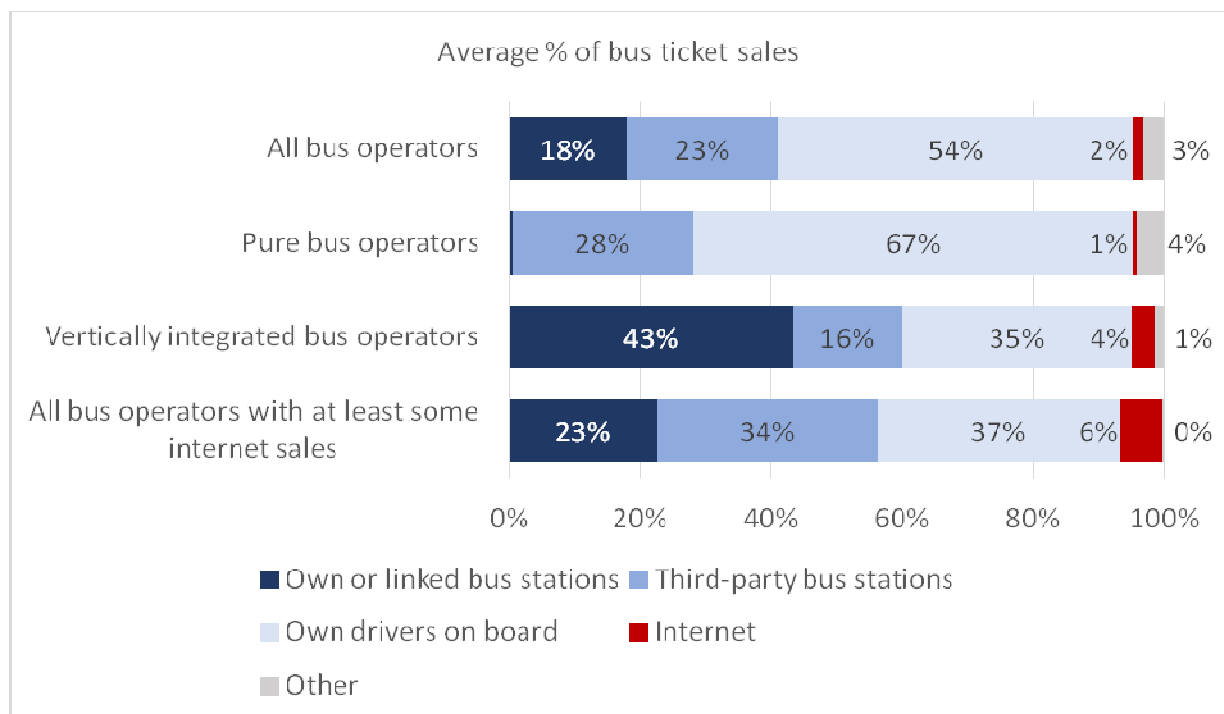
<sup>112</sup> Article L. 3114-5 of the French Transport Code- [Decision No. 2017-116 of October 4, 2017 governing pricing policies, capacity allocation procedures and accounting rules for road transport facilities.](#)

<sup>113</sup> For example, Finland, Denmark, the Netherlands, and the Czech Republic.

example, COVID-19-related bus schedule changes are presented as scanned images of each company's timetable changes, following different formats and last updated in mid-2020. The resulting schism of data sources, formats, and coverage impedes ease of use and comparability of operators' schedules. Due to shortcomings of the data shared by regulatory authorities and private operators, travelers are forced to use bus stations as the most reliable source for information on connections, operators, fares, and service disruptions.

**Consequently, the uptake of online ticket sales has stalled and remains insignificant compared to other options.** E-ticketing remains underdeveloped as many carriers are small and cannot afford their own e-ticketing system, nor to partner with online vendors.<sup>114</sup> According to data collected by the WBG and the CPC for this market study, only 35 percent of operators sell their tickets online.<sup>115</sup> Even for operators that sell tickets via internet, online sales account for only 6 percent of total ticket sales, whereas most tickets are sold on boarding the bus. In comparison, nearly 60 percent of bus tickets in the UK are being sold online.<sup>116</sup>

*Figure 16. Breakdown of bus ticket sales channels (2019)*



*Source:* WBG staff analysis of data collected through the WBG-CPC survey of bus companies and bus station operators. See Annex B for more information on the survey.

<sup>114</sup> The most common third-party platform websites that are used by operators to sell tickets are polazak.rs, redvoznje.net, casseopeia.biz, busticket4.me, and teroplan.rs.

<sup>115</sup> Out of 74 operators that provided data on total and internet bus ticket sales.

<sup>116</sup> Data from Opinions and Lifestyle Survey (OLS) carried out by interviewing a nationally representative sample of households in Great Britain. About 1,800 households were sampled monthly.

## Harm to competition

**Without readily available information on bus services, travelers cannot make informed choices, resulting in higher average fares and lower price dispersion.** Before travelling, customers choose between available modes of travel, schedules, fares, and other travel features (for example, class of service) to select their preferred travel choice. In the absence of such basic travel information (fares, schedules, and routes), consumers are not able to select the option that best fits their needs. As a result, operators are unable to effectively differentiate between consumers and understand the preferences of different groups. In effect, travelers face limited choice of services and prices, and operators fail to match the right customers to the right products, leading to travelers selecting imperfect connections and higher prices.

**Available options to plan travel and compare ticket prices are incomplete and time-consuming, increasing the cost of travel.** In many cases, travelers are forced to visit a bus station ahead of time or collect and combine information from multiple sources—fostering information asymmetries and inducing search costs, tracking costs, and verification costs. Additionally, lack of information about vehicle movement and service disruptions makes it difficult for passengers to embark at preferred bus stops and encourages them to use central bus stations. Passengers who embark at bus stations are frequently required to pay platform access fees on top of their base fare, further increasing costs to consumers.

## Alternative

**Bringing all intercity travel information into a single real-time database could improve market functioning by lowering search costs and facilitating firm expansion.** A central database could offer integrated data on all intercity bus connections to/from all available stopping points, up-to-date fares, and any changes to service in real time. Supplemental data such as vehicle location, planned/unplanned service disruptions, and historic information about punctuality of service could be also added. Centralized data on intercity connections would enable side-by-side comparisons of fares across operators, resulting in lower prices, customer satisfaction, and greater product differentiation. In turn, operators could use the central information to explore market niches and analyze consumer preferences. The aviation sector has seen a reduction in ticket pricing and increased diversity in product offering (for example, premium economy and priority boarding) as a result of a shift toward online travel agents and booking websites.<sup>117</sup> Similar consumer gains could materialize in the bus transportation market.

**An ‘open’, publicly available, and centralized bus travel database could generate additional spillovers such as boosting tourism, improving accessibility, and encouraging new product offerings.** A centralized bus transport database would not only benefit the transport and bus transport sector but also generate positive externalities in other sectors. For example, tourism flows may increase as visitors may find it easier to plan and explore the country, shaping Serbia’s overall attractiveness as a tourist destination. Analysis of bulk data on transactions and routes may open opportunities for optimizing bus

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<sup>117</sup> How does the internet influence price dispersions? Evidence from the airline industry:  
<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-6451.2011.00444.x>.

transport routes and promote wider adoption of other e-ticketing solutions. Finally, improved passenger information serves better mobility for persons with disabilities and promotes inclusion.<sup>118</sup>

**Centralized open data platforms on bus connections are already widely available in several EU countries.** In the Czech Republic, timetable data collection is enforced by the national legal framework and is stored in the National Timetable Information System (NTIS) run by a local information technology (IT) firm. Based on NTIS data, the Czech Republic developed a nationwide multi-modal journey planner IDOS, which is the winner of the European Commission’s Smart Mobility Challenge. IDOS’s main features include optimal seamless connections from/to station, points of interest (POIs), address or geo coordinates, Google maps route visualization, basic fares calculation, and so on, and it is accessed by up to 66 million users per month. Similarly, in 2020, the UK Department for Transport launched the Bus Open Data Service, the purpose of which is to help improve transparency around bus times, routes, and fares for passengers. The expanded scope of open data encompasses both timetable data and fares data, as well as vehicle location (real time) data and historic performance (punctuality) data. Similar public databases also exist in Finland,<sup>119</sup> the Netherlands,<sup>120</sup> and Bulgaria,<sup>121</sup> among other countries.

**Although there is evidence of demand for centralized bus transport information, development of such solutions has been lagging, suggesting the need for government intervention.** In Serbia, there is a clear demand for transport information from passengers—according to the latest Digital Report for Serbia,<sup>122</sup> the word ‘timetable’ (*red vožnje*) was in the top 20 Google search queries in 2020, with 26 percent of search volume compared to the top query. However, no private sector solutions have emerged to fill the gap for a centralized portal offering e-ticket sales, prices, bus schedules, and bus capacity information. Evidence suggests that such portals emerged in other markets through competitive pressures, such as the South Korean bus transport open data in response to growing rail transport, or through government support via instruments such as national priorities on data interoperability (for example, in the case of Finland). With no viable alternative to bus travel in Serbia, bus operators are not pressured to compete with other platforms or modes of transport nor have they sufficient incentive to disrupt the sector with new innovations.

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<sup>118</sup> Information and Communication Technology (ICT) Tools for Persons with Disabilities Inclusivity in Development in Developing Nations: A Literature Review: <http://library.kibu.ac.ke/wp-content/uploads/2018/08/Kibabii-University-Conference-Information-and-Communication-Technology-ICT-Tools-for-Persons-with-Disabilities-Inclusivity-in-Development-in-Developing-Nations-A-Literature-Review.pdf>.

<sup>119</sup> Finland HSL HRT travel planning: <https://www.hsl.fi/en/travelling>.

<sup>120</sup> Netherlands 9292 travel planning: <https://9292.nl/en/about-9292>.

<sup>121</sup> Bulgaria Open Data Portal: <http://data.obshtestvo.bg>.

<sup>122</sup> Digital 2020: Serbia, p. 26. Available at <https://datareportal.com/reports/digital-2020-serbia?rq=serbia>.

### 3. Recommendations

Recommendation	Regulation	Justification	Responsible institution
<p><b>1. Fully harmonize licensing requirements for bus operators with the Regulation EC/1071/09:</b></p> <p>(a) Abolish the three-vehicle ownership requirement and allow for all vehicles to be leased.</p> <p>(b) Abolish the requirement that the number of drivers must correspond to the number of vehicles.</p> <p>(c) Abolish the 18-seat requirement.</p> <p>(d) Allow insurance or bank guarantee to serve as evidence of financial standing.</p>	<p>Articles 22, 25, and 59 of the Road Passenger Transport Act (Official Gazette Nos. 68/2015, 41/2018, 44/2018, 83/2018, 31/2019, and 9/2020)</p> <p>2018 Guidance for submitting the request for obtaining transport license, published by the Ministry</p>	<p><b>Some licensing requirements go beyond the necessary requirements for passenger safety and quality of service.</b> Licensing requirements are in place to ensure passenger safety and quality of service. However, Serbia's RPTA goes beyond the EU's Regulation EC/1071/09 in the following ways:</p> <ul style="list-style-type: none"> <li>• It stipulates that operators must own or hire-purchase at least three vehicles for intercity passenger transport and employ at least as many professional drivers as they have vehicles.</li> <li>• It stipulates that intercity transport can only be performed with buses that have at least 18 seats.</li> <li>• It does not clarify whether financial standing can be demonstrated by means of bank guarantee or professional insurance.</li> </ul> <p><b>Overly strict licensing requirements harm competition.</b> The differences between the Serbian RPTA and Regulation EC/1071/09 limit entry by raising the effective cost of obtaining a license. They also discriminate against smaller operators by establishing minimum scale requirements. In turn, these restrictions reduce the pool of bus companies in the market, potentially limiting supply and raising costs.</p> <p><b>Abolishing excessive licensing requirements would open the market for new entry and boost competition.</b> Other requirements regarding stable and effective establishment, professional competence, financial standing, and good repute—coupled with regulations on technical and safety standards for vehicles and work hours of drivers—are already sufficient to promote passenger safety and quality of service in interurban passenger transport. Thus, bringing licensing requirements in line with EU norms would promote competition without compromising safety and quality of service.</p>	Ministry of Construction, Transport and Infrastructure

Recommendation	Regulation	Justification	Responsible institution
<b>2. Abolish exclusive rights over individual connections by</b>  (a) Removing timetable coordination through the CoC, (b) Replacing route authorization with notification of service to the Ministry, and (c) Allowing stations to freely establish protection times subject to a short statutory minimum.	Articles 62, 64–68, 70, 73, 74, 99–101, 104–109, 114, 116, and 123 of the Road Passenger Transport Act (Official Gazette Nos. 68/2015, 41/2018, 44/2018, 83/2018, 31/2019, and 9/2020)  Rulebook on Conditions and Procedures for Coordination of Timetable Proposals with Registered Timetables in Intercity Transport (Official Gazette No. 16/17)  Guidelines on Procedures for Coordination of Timetable Proposals with Registered Timetables in Intercity Transport (Official Gazette No. 16/18)	<p><b>The current system of timetable coordination grants exclusive authorization to a single operator on a given connection (origin-destination-time combination).</b> Entrants are required to coordinate their timetables against existing services via the CoC. This process effectively grants monopolies over connections by banning parallel services within a certain time window (that is, protection times).</p> <p><b>The existing policy aims to safeguard continuity of service, ensure access to service in low-traffic areas, and incentivize investment in connections.</b> Granting exclusive rights could help preserve continuity of service because (a) operators may be better incentivized to preserve service on profitable monopoly routes and (b) monopolies are granted on the condition of maintaining service. In addition, operators may be incentivized to keep low-traffic feeder routes open if they feed passengers into a profitable monopoly route over which they also hold rights. Finally, ‘protection times’ are meant to incentivize investment by preventing rival operators from poaching competitors’ passengers, a practice known as ‘interloping’.</p> <p><b>Timetable coordination harms competition in several ways.</b> First, coordination of timetables is a form of institutionalized market sharing and divides the market between competitors. Relatedly, coordinating timetables through the Chamber may facilitate collusion by making it easier for competitors to communicate. Furthermore, granting exclusivity effectively caps the number of operators servicing a connection. Finally, making coordination mandatory only for new timetables protects incumbents.</p> <p><b>The stated policy objectives of timetable coordination can be achieved with less distortive means.</b> On commercially viable routes, eliminating coordination would improve access by allowing new entrants and more departures. Loss of service on low-traffic routes would be limited: routes that may lose service account for &lt;7% of bus-kilometers traveled. In addition, it would be less distortive to implement direct subsidies to preserve service on low-traffic routes rather than grant monopolies on high-traffic routes.</p> <p><b>Finally, ‘protection times’ could be amended to allow greater competition while still preventing interloping (practice of poaching competitors’ passengers by arriving just before the competitors’ scheduled services).</b> Protection times could be made specific to departures for a given destination from a given pickup location (rather than an entire origin-destination pair). In addition, stations could be given the flexibility to choose these protection times themselves, subject to a short statutory minimum (for example, 10 minutes).</p>	Ministry of Construction, Transport and Infrastructure

Recommendation	Regulation	Justification	Responsible institution
<b>3. Monitor market behavior of leading bus companies</b>	Articles 21 and 35 of the Protection of Competition Act (Official Gazette Nos. 51/2009 and 95/2013)	<p><b>Historically, there have been numerous instances of collusion among market participants.</b> Serbia's CPC has pursued cases against several bus companies for setting up anti-competitive pooling systems that enabled competitors to split up the market, share costs and revenues, and in some instances fix prices.</p> <p><b>In addition, the risk of collusion remains high in the Serbian intercity bus market.</b> The current system of timetable coordination facilitates communication and information sharing among competitors, making cartelization easier. In addition, bus companies compete with one another along multiple routes (that is, multi-market contact). Multi-market contact facilitates cartel-like arrangements by making it easier for cartel members to retaliate against competitors who deviate from cartel arrangements.</p> <p><b>The CPC should continue to monitor the market closely.</b> This entails intensifying enforcement by closely monitoring the behavior of market players—especially leading players—and investigating any signs of collusion. Increased scrutiny and strong sanctions for anti-competitive conduct are among the most effective antitrust enforcement tools and a powerful deterrent.<sup>123</sup></p>	CPC
<b>4. Limit abusive practices of bus stations by</b>  (a) Abolishing exclusivity of bus stations, (b) Requiring bus stations to accept all types of tickets, and (c) Considering accounting separation for bus station services.	Articles 38–54 and 99 of the Road Passenger Transport Act (Official Gazette Nos. 68/2015, 41/2018, 44/2018, 83/2018, 31/2019, and 9/2020)  Article 5 of the Rulebook on Conditions and Procedures for Coordination of Timetable Proposals with Registered Timetables in Intercity Transport (Official	<p><b>Bus station exclusivity is designed to promote passenger safety, inclusivity, and ease of travel.</b> The RPTA requires bus operators to stop at or terminate routes at bus stops, in the case of international and domestic routes, respectively. Additionally, requirements are placed on bus stop features such as surveillance, lighting, vehicle tracking, seating for disabled passengers, and audio/visual departure information. For both operators and bus stations, these requirements aim to promote safety, inclusion, and efficient interconnections between routes and other modes of transport.</p> <p><b>However, bus station exclusivity unintentionally strengthens the dominance of stations and contributes to higher fees and lower quality of service.</b> Network economies and sector regulations put bus stations in a dominant position. This dominant position can be used by operators, in particular vertically integrated companies, to discriminate against rival firms. Data from a firm survey in Serbia confirm that most bus companies that are not owners of bus stations complain about high fees or low quality of services in Serbia. Comparisons with other EU countries also indicate higher station fees in Serbia.</p> <p><b>Bus service safety, inclusivity, and ease of travel can be achieved by allowing the establishment</b></p>	Ministry of Construction, Transport and Infrastructure

<sup>123</sup> UK Competition and Markets Authority, 2017.

Recommendation	Regulation	Justification	Responsible institution
	<p>Gazette No. 16/17)</p> <p>Rulebook on traffic-technical and other conditions for construction, maintenance and operation of bus stations (Official Gazette No. 7/17)</p>	<p><b>of ‘basic’ bus stations.</b> The RPTA and its bylaws could promote the opening of new bus stations that would be subject to technical requirements that are equivalent to the current requirements but whose fulfillment is less costly. These ‘basic’ bus stations could be designated as terminal stops or transit stops on par with existing stations. At the same time, the creation of new stops would diminish the market power of existing stations and provide incentives to lower fees and improve services. The creation of ‘basic’ bus stations is allowed in other countries, for example, Slovenia.</p> <p><b>Complementary solutions to minimize abusive practices and increase competitive pressure could also be considered.</b> Station operators could be mandated to accept e-tickets and ticket purchases from drivers. In addition, affiliated stations could be mandated to perform mandatory account separation for station and bus services.</p>	
<b>5. Regulate procedures for designating new intercity bus stops on initiative of operators</b>	<p>Article 60 of the Road Passenger Transport Act (Official Gazette Nos. 68/2015, 41/2018, 44/2018, 83/2018, 31/2019, and 9/2020)</p>	<p><b>Designation of new intercity bus stops is not regulated and is only possible by official initiative.</b> Currently, intercity bus stops—other than dedicated bus stations—are exclusively designated by local authorities and require approval by the Ministry. Neither the RPTA nor its bylaws (a) establish a procedure for setting up intercity stops by local authorities or (b) allow bus companies to request the creation of such stops.</p> <p><b>The lack of clear procedures for establishing new intercity stops reduces the ability of operators to differentiate themselves from competitors.</b> Local authorities have wide discretion over the location of local intercity bus stops. These authorities may have divergent incentives from operators, such as maximizing existing infrastructure and avoiding costs of new construction and maintenance. Consequently, operators are constrained in designing their transportation network and diversifying their services. Further, this system creates incentives and gives room for lobbying by incumbents, raising the potential for unequal treatment and discrimination against small operators.</p> <p><b>Allowing bus operators to initiate the establishment of new intercity bus stops—and regulating this process—would improve market functioning.</b> Introducing a procedure for designating bus stops would allow for private sector initiative, increase transparency, and level the playing field for businesses. This procedure could stipulate (a) the authority in charge of reviewing requests, (b) the conditions for setting up a new bus stop (technical, safety, and security standards), and (c) a timeline for issuing the decision by the competent authority.</p>	Ministry of Construction, Transport and Infrastructure
<b>6. Open data about intercity bus connections</b>	<p>Articles 38 and 56 of the Road Passenger Transport Act (Official Gazette Nos. 68/2015,</p>	<p><b>Information about intercity connections is available online but is incomplete, not regularly updated, and lacking reliability and uniformity across sources.</b> Due to the shortcomings of the data shared by regulatory authorities and private operators, travelers are forced to use bus stations as the most reliable source for information on connections, operators, fares, and service</p>	Ministry of Construction, Transport and Infrastructure

Recommendation	Regulation	Justification	Responsible institution
	<p>41/2018, 44/2018, 83/2018, 31/2019, and 9/2020)</p> <p>Article 14 of the General Conditions of Intercity Transport (Official Gazette No. 45/19)</p> <p>Articles 3, 12, and 15 of the General Conditions of Bus Station Operations (Official Gazette No. 102/20)</p> <p>Articles 3, 4, and 16 of the Rulebook traffic-technical and other conditions for construction, maintenance and operation of bus stations (Official Gazette No. 7/17), in connection with the Rulebook on categorization of bus stations (Official Gazette No. 109/20).</p>	<p>disruptions. Consequently, travelers cannot make informed choices resulting in higher fares (via increased search, tracking, and verification costs), and as a result, operators are unable to differentiate between customer preferences.</p> <p><b>A central real-time database combining all intercity travel information could improve market functioning by lowering search costs and facilitating firm expansion.</b> A single database covering all stopping points, up-to-date fares, and real-time service disruptions would enable side-by-side comparisons across operators resulting in lower prices, higher customer satisfaction, and greater product differentiation. This would also benefit operators, providing insights on market niches and consumer preferences, as well as spillovers to other sectors such as tourism by facilitating holiday travel planning.</p> <p><b>Development of such solutions has been lagging, despite clear benefits, wide use of open data platforms in other EU countries, and evidence of demand for centralized bus transport information within Serbia.</b> Due to lack of competitive pressures from other viable alternatives to bus travel, no private sector solutions have emerged to fill the gap for a centralized portal offering e-ticket sales, prices, bus schedules, and bus capacity information—suggesting the need for government intervention.</p>	

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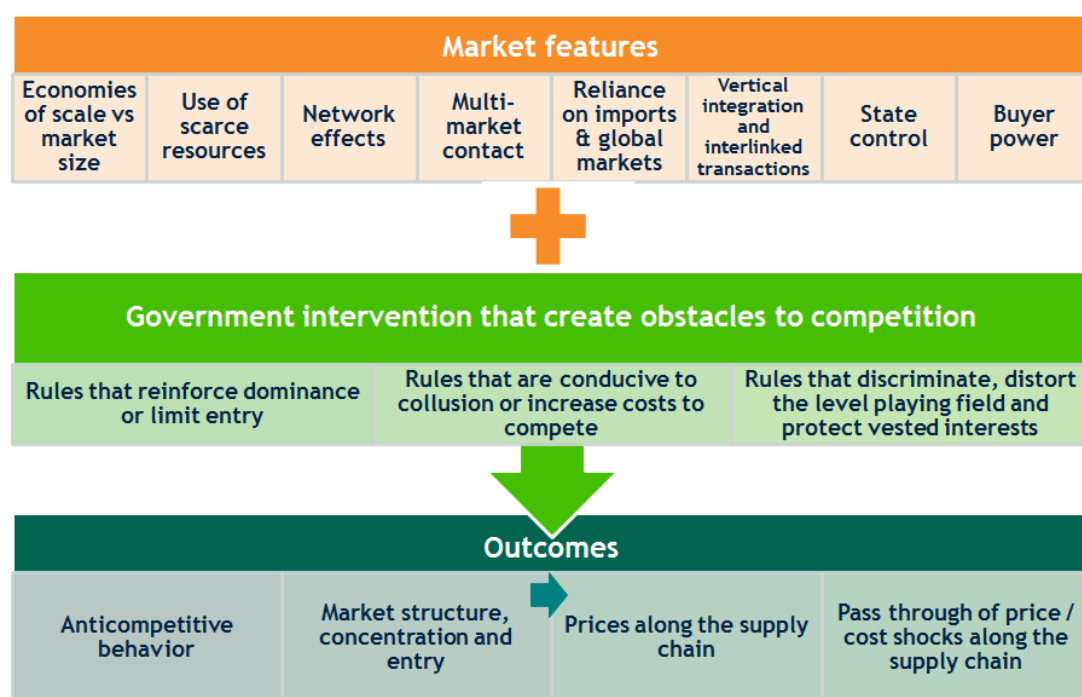
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## Annex A. Markets and Competition Policy Assessment Tool (MCPAT)

The MCPAT is a framework of analysis developed by the WBG Competition Policy Team to identify specific problems at the market level and prioritize interventions accordingly. It has been elaborated based on WBG experiences gathered from work in over 60 countries. It provides a standardized and comprehensive tool that allows to (a) understand competition dynamics created by market features (including supply-side characteristics and buyer characteristics) and (b) identify and assess the potential noncompetitive effects of government intervention in markets (Figure A.1). The interaction between these two elements can then be analyzed to determine the risk of noncompetitive behavior, both in terms of collusion and exclusionary abuse of dominance. This assessment informs the development and prioritization of effective strategies to promote competition through changes in policies and regulations.

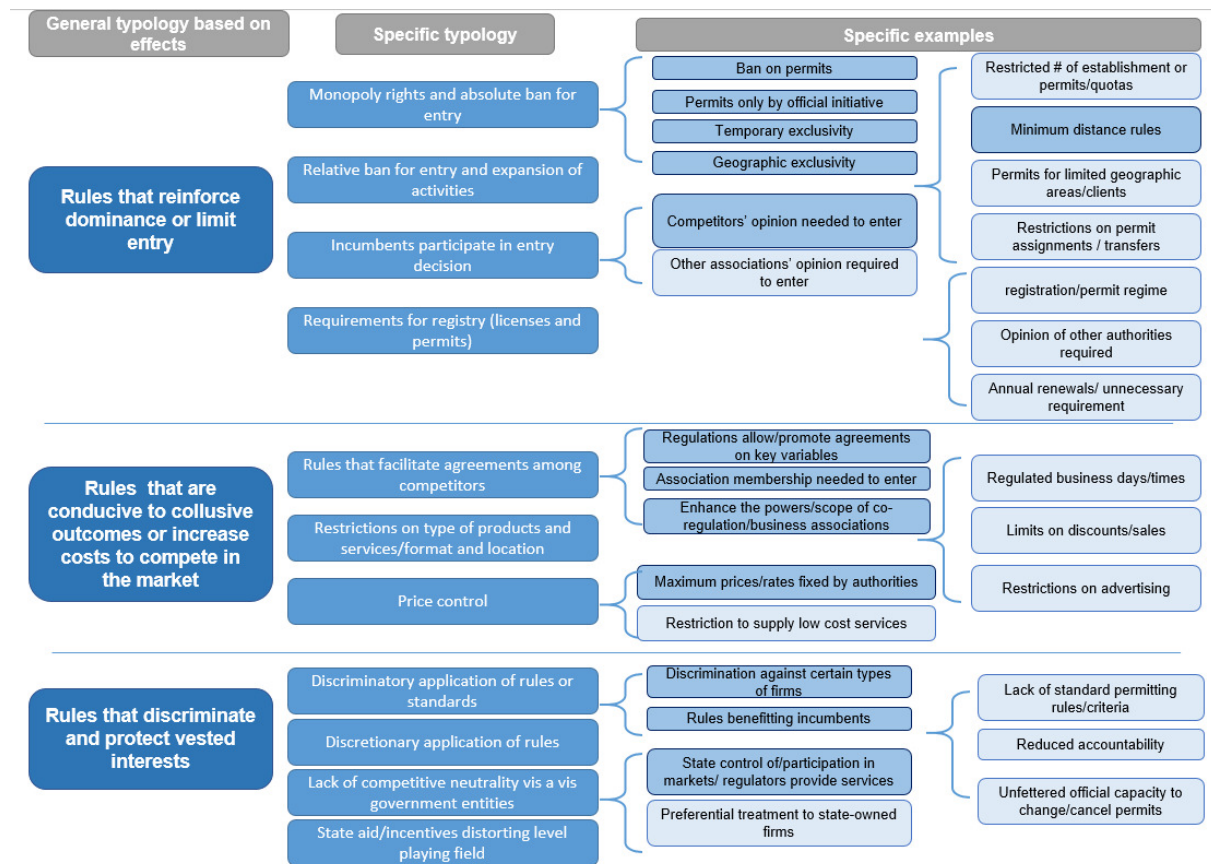
Figure A.1. High-level overview of the MCPAT approach



Source: WBG.

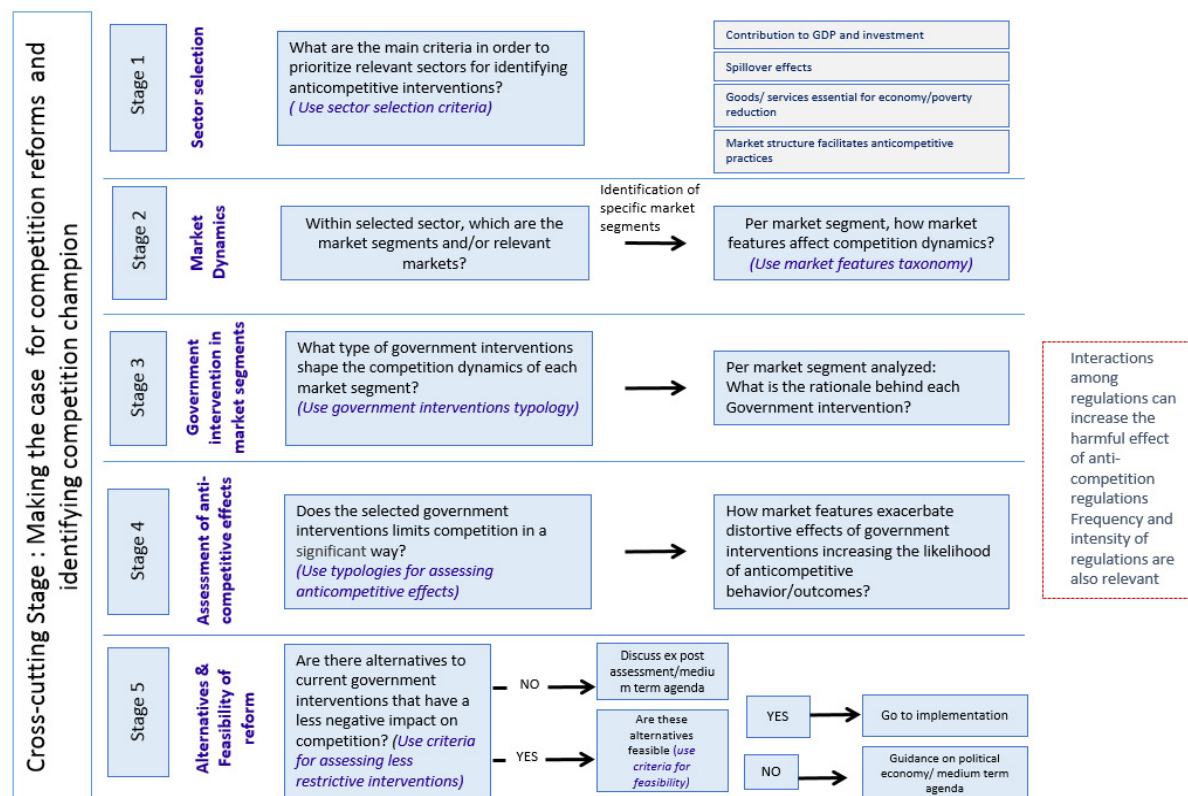
The MCPAT builds on the identification of rules and regulations that may have noncompetitive effects. Three types of rules are distinguished: (a) rules that reinforce dominance or limit entry, (b) rules that are conducive to collusive outcomes or increase costs to compete in the market, and (c) rules that discriminate and protect vested interests (Figure A.2). The MCPAT breaks down each of these categories into subtypes and provides examples for each of the subtypes. This typology feeds into a holistic step-by-step methodology to promote competition reforms (Figure A.3).

Figure A.2. MCPAT typology of competition restrictions



Source: WBG.

Figure A.3. MCPAT methodology to promote pro-competition reforms



Source: WBG.

## **Annex B. Survey of Bus Companies and Station Operators in Serbia**

To gather further information on the intercity bus market in Serbia, the WBG and Serbia's CPC collaborated on a survey of bus companies and station operators in Serbia. The survey gathered information on individual companies' financial performance, operations, fee structures, and experience with regulations and other market players.

### **Survey design**

The WBG and the CPC co-designed the survey questionnaires to fill in gaps where publicly available data were not available. The survey instruments benefitted from inputs from the WBG's Transportation and Markets and Competition teams as well as the CPC's experience within the Serbian market.

Three separate questionnaires were developed to cover the different types of firms in the market:

- **Pure-play bus operators.** This form of the questionnaire was shared with firms that operate intercity bus services but not stations. Topics covered included (a) revenues and costs associated with bus operations, (b) operational statistics such as departures and bus-kilometers traveled, (c) sales channel breakdowns, (d) likely reactions to changes in various regulations in terms of routes offered and departure frequencies, (e) experience with regulatory barriers and competition policy in Serbia, and (f) perceived quality of service provided by bus stations.
- **Pure-play station operators.** This form of the questionnaire was shared with firms that operate bus stations for intercity bus travel but do not offer bus services of their own. Topics covered included (a) revenues and costs associated with station operations, (b) operational statistics such as arrivals and departures at stations, (c) fee structures and revenue sources (including any differences between unaffiliated and affiliated bus operators), and (d) perceived barriers to entry within the bus stations market.
- **Vertically integrated bus operators.** This form of the questionnaire was shared with firms that operate bus stations and provide intercity bus services of their own. It combines content from the questionnaires for pure-play bus operators and pure-play station operators and covers additional topics related to accounting separation between bus service and station operations and differential treatment of own versus third-party bus services.

### **Survey implementation**

The Ministry provided the WBG-CPC team with comprehensive lists of companies to contact based on all licenses and registrations issued as of 2019. The WBG-CPC team then cross-referenced these lists with the Serbian Business Registry database to link it to contact information and email addresses for the firms. By merging the license and registry data, the team generated a master file with contact information for all relevant intercity bus and station firms operating in the market. This list was then cleaned to remove companies that were in bankruptcy or liquidation.

The survey was implemented using a hybrid data collection process mixing physical correspondence and electronic data entry. First, initial request for information (RFI) letters were sent via hard copy to the addresses of bus operators and stations. These RFIs in turn instructed recipients to download Microsoft

Excel-based survey forms from the CPC website, fill in the forms, and submit the forms via email to the CPC. While the RFIs did not mandate that specific individuals within the firms respond, general corporate rules in Serbia make the chief executive officer (CEO) responsible for official communication with state authorities. In all, 126 RFIs were distributed to pure-play bus operators, 21 to pure-play station operators, and 39 to vertically integrated bus operators.

The team conducted extensive follow-up actions to obtain complete and valid responses from as many firms as possible. Reminders were sent to firms that did not respond. In addition, as the RFI was classified as an official state survey, firms that ignored repeated requests for information were technically subject to fines. RFI recipients were invited to reach out to the CPC via email or phone to clarify any confusions, and the WBG-CPC team further reached out directly to firms to fix issues with invalid data (for example, implausible revenue figures or conflicting answers across questions).

In all, the RFI process achieved a 52 percent response rate with pure-play bus operators, a 95 percent response rate with pure-play station operators, and a 74 percent response rate with vertically integrated bus operators. Most of the significant firms in the market responded to the RFI: For example, the team obtained RFI inputs from 9 of the top 10 bus operators by bus-kilometers traveled.

### **Survey analysis**

After validation and cleaning of data, the WBG team generated a consolidated data set for analysis based on responses from all RFI respondents and questionnaire types. Questions were harmonized across questionnaires to allow analyses across pure-play and vertically integrated firms.

Various analyses were conducted to generate an overview of the market and examine heterogeneity across firms. In addition to overall tabulations of responses, the team generated cross-tabulations of the data based on pure-play versus vertically integrated operators and firm size. Data from the survey were particularly instrumental for analyzing firm practices and perceptions of regulatory and other barriers to competition. Information on these topics was not observable through other means and data sets.

## **Annex C. Collection and Analysis of Bus Connection Data**

To conduct market-level analysis, the authors of this report developed an automated web scraping algorithm that collected and aggregated data on bus connections in Serbia. Information on domestic connections was sourced from an interactive web application made available by the Serbian CoC, allowing users to search a single year, company, and timetable at a time. Information on international connections was sourced from publications of the Ministry. Direct, bulk access to the connection data was not possible for technical reasons.

### **Data sources**

The interactive web application of the Serbian CoC contains information on all domestic bus connections in Serbia between 2012 and 2016. The application uses Java script to answer user queries. It prompts users to select a year between 2012 and 2016 and an operator, and subsequently, the users are provided with a list of route-level bus timetables. Each timetable reports

- (a) Operator name;
- (b) Name of the route;
- (c) Date of validity for the information (for example, 2016);
- (d) Name/location of individual stops along the given route;
- (e) Time of departure for each stop along the route, including cases of multiple schedules;
- (f) Distance in kilometers between individual stops; and
- (g) Information on departures that have been cancelled but are still reported on official timetable—these are denoted by stricken through departure locations and times in the timetable.

International intercity bus connection information is provided online by the Ministry through a publicly accessible collection of PDFs covering timetables and operators for 2018. A separate PDF is provided for each individual country which has international bus connections to and from Serbia, resulting in a total of 24 PDF documents outlining bus operators and their respective timetables. The information in the PDF timetables mirrors that of the domestic, regional, and intercity timetables available on the online interface, covering operator, route, bus stops, and departure times, as well as any adjustments or changes to the schedule.

### **Data collection**

Two different methodologies were developed to collect information on bus connections, one for domestic regional and intercity connections and the second for international intercity bus connections.

Domestic bus connection timetables are collected through an automated algorithm scripted in R (programming language). The R script utilizes, among other packages, the 'RSelenium' package, which allows the user to program an automated logic for navigating websites. In this case, the algorithm instructs the computer to open the Serbian CoC web app and in an automatized fashion to navigate through years, operators, routes, and sets of multiple pages to arrive at every single timetable listed on the website. Upon navigating to a specific timetable, the algorithm records the path that led to the

timetable and collects all data on the timetable webpage into a series of data frames. In total, four data frames were produced per timetable:

- (a) Navigation path to timetable
- (b) Timetable with times, dates, stops, and distances
- (c) HTML code information specific to any 'Strikethrough' information superimposed over the primary tables (denoting cancellation of stops and/or departure times)
- (d) All other information listed on route name, operator, and validity date.

Each timetable data frame creates a series of identification columns which include route, operator, year, and a unique timetable identifier created by the algorithm. Next, the individual timetable data frames are aggregated across all timetables in a given year. Taking 2016 as an example, a total of four data sets are created: (a) navigation path data set covering all timetables in 2016, (b) primary timetable data set covering all timetables in 2016, (c) strikethrough information for all timetables listed in 2016, and (d) summary of all other timetable-relevant information for all timetables in 2016. The navigation path data frame was used to cross-check operator, route, and year information recorded in the timetable for accuracy.

Subsequently, information from the four data sets, for a given year, was combined and transformed into a A–B stop-level data set considering cancelled stops (that is, removing cancelled departure times and locations). A–B stop-level data present a separate row for every stop along a route, operator, and year pairing. For example, if connection A–B was serviced by two operators, where each operator has two routes servicing A–B, a total of four rows was recorded in the data set. Departure hours and times are recorded and collapsed at the individual connection level.

Separate data sets were created for each year due to slight differences and server errors occurring on the webapp across years. These unique features required slight adjustments to the algorithm. Completion of data scrapping for one year took about five hours of automated scraping.

International bus connection timetable information was also collected through the development of an R script. However rather than using web navigation and scraping tools, international bus connection timetable data were collected and aggregated by reading individual PDF files and converting PDF text into data frames.

### **Data analysis**

Data collected from domestic and international timetables were utilized to support and inform evidence gathering. Domestic timetable data were of primary focus and provided insights on frequency of routes by distance, location, major city, and operator. Mapping of connection-level information was performed using a Google Maps Application Programming Interface (API) to retrieve longitude and latitude coordinates based on stop name, as reported in timetables.

The Google Maps API was also utilized for geo-tagging of individual bus stop names to verify locations and accuracy of reported stops along A–B routes. All stop names appearing in the scraped bus schedule data, across all years, were searched via the API in a variety of formats to increase the chances of a match. These formats include omitting/inserting 'Serbia' in the name of the stop and/or excluding special characters listed in the names. A final list of matched stops was created if a given bus stop

location generated a specific singular set of coordinates in Serbia, matching a known Google Maps location. Geo-tagged bus stop data served the purpose of comparing data analysis between a sample of complete bus stop listings versus geo-tagged bus stop listings in the interest of additional validation and sensitivity analysis. The findings of this report have been robust across different methods of specifying the locations of bus stops.

International timetable data were primarily used for better understanding the number of operators servicing international intercity connections in Serbia.