# Nearshoring the Automotive Supply Chain: an Analysis of Serbia as a Hub for Automotive Part Production

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## Abstract

**Title:** Nearshoring the Automotive Supply Chain: an Analysis of Serbia as a Hub for Automotive Part Production

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**Keywords:** Automotive Industry; Parts; Manufacturing; Serbia; Europe; Nearshoring; Market Entry; Risks; Emerging Market

The automotive industry has continuously evolved from its inception. Currently the industry is comprised of complex supply chains spanning the globe. Disruptions to these supply chains can cause issues for automotive manufacturers leaving them with a shortage of parts. Auto part suppliers are now looking to nearshore their production to emerging markets in Europe. Serbia has a rich history of automotive production, however harsh sanctions placed by the United Nations during the early 90's saw the industry all but vanish. In the past decade, the automotive industry has re-emerged due to large amounts of foreign direct investment. Now Serbia is positioned as a potential hub for automotive part production in Europe due to having some of the lowest wages in Europe coupled with a large unemployed population. This study analyses the opinions of industry professionals working within the country to form a comprehensive analysis on the risks and benefits of doing business in Serbia. It also considers the most beneficial auto part to produce in the country. Opinions and data show that Serbia's current political climate point towards a "Business Friendly" atmosphere for foreign investors. There is no limitation on the type of auto parts that can be produced in the country, however, parts with a low-skill level to produce and a high labour intensity (LSHI) tend to hold the smallest risk to achieve profitable production when deciding to operate in the country.

## Resumó

**Título:** Nearshoring as Cadeias de Abastecimento Automobilísticas: uma análise sobre a hipótese de a Sérvia tornar-se num dos principais centros de inovação Europeu, na industria de peças automóveis.

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A indústria automobilística tem continuamente evoluído desde o seu início. Atualmente, a indústria é composta por cadeias de abastecimentos complexas que abrangem o globo. As interrupções das mesmas, podem causar problemas para os fabricantes de automóveis, deixando-os com uma escassez de partes mecânicas. Os fornecedores de peças automóveis estão, cada vez mais, a concentrar as suas produções em mercados emergentes na Europa.

Na última década en Sérvia, devido a grandes volumes de investimento estrangeiro direto, a indústria automóvel voltou a ter um crescimento de produção. Devido à elevada taxa de desemprego, juntamente com um salário bastante inferior em relação ao resto da Europa, esta situação poderá potencializar o desenvolvimento de um centro de produção automóvel na Servia, podendo assim, reafirmar-se como uma das principais potências Europeias na construção de partes automobilísticas.

Este estudo analisa as opiniões de profissionais da indústria que trabalham na Sérvia com o intuito de formar uma análise mais abrangente sobre os riscos e benefícios de fazer negócios no país. Nesta análise, é também, considerada a peça automóvel mais vantajosa para se produzir na Sérvia.

Opiniões e dados mostram que o clima político atual do país aponta para uma atmosfera "favorável aos negócios" para investidores estrangeiros.

Não há limitações sobre os tipos de peças de automóveis que podem ser produzidas na Sérvia, contudo as peças com baixo nível de qualificação para produzir e, com alta intensidade de trabalho (LSHI) tendem a ter um menor risco no que toca ao atingir uma produção lucrativa.

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# 1. Introduction

Throughout the 80's and early 90's, Yugoslavia had a booming automotive industry which included the production of the national icon, the Yugo, from the Zastava factory in Kragujevac. However, the fallout of the Yugoslav wars and the breakup of the country led to harsh sanctions placed on Serbia by the UN (RAS, 2020). Following this, the country slid into recession and the next decade was met with economic hardship. This caused stagnation in the once prominent industry and throughout the course of a decade saw factories close and the automotive industry cease to exist almost entirely. The industry remained silent until 2008 when Fiat acquired the Zastava factory and invested almost 1 billion euros into it, assisting in the revival of the Serbian automotive sector (Parezanin et. al, 2016). The past decade has seen considerable investment in the automotive sector from various world leading suppliers. Currently, the automotive sector is one of country's leading industries and the Serbian government is actively seeking foreign investment in the sector, offering various grants and tax rebates as incentives (RAS, 2020).

The automotive sector has evolved, and geographical proximity is more important than ever. Although complex global supply chains exist growing logistical and transport costs have seen companies looking to adapt and produce closer to their home base, reducing reliance on external factors (Schmitt & Biesebroeck, 2013). For European manufactures, the CEE region has seen a boom in investment in the automotive sector as firm try to find a profitable means of production. Serbia, whilst currently overlooked in the automotive sector, has the same benefits as EU nations through free-trade agreements. As suppliers look for more efficient ways to produce within the content, an evaluation of the potential risks of investing in Serbia is crucial.

## 1.1 Problem Statement and Research Questions

The recent global pandemic has shone a light onto how easily global supply chains can be disrupted in the face of a crisis. Auto makers throughout Europe have experienced supply chain issues during the pandemic, forcing some to halt production altogether. Amid a global pandemic and with the future remaining uncertain, nearshoring the production of components could be vital in keeping supply lines open within Europe.

There are significant benefits for foreign investors in certain emerging markets. Serbia has the lowest corporate tax rate in Europe (10%) and government offered rebates for investors who create new jobs in the economy (Santander, 2021). The country also has a highly skilled workforce with 14 technical faculties, 18 technical colleges and 132 secondary technical schools. These institutions work with the industry and investors, tailoring their teachings according to the needs of the industry. With an average salary of 385.2 euros net per month for workers in the automotive sector and a minimal net salary of 233 euros, Serbia has one of the cheapest workforces in Europe. It also has free trade agreements which cover most key industrial products with multiple countries allowing for duty-free exports. This includes the European Union, South East Europe, Russian Federation, Belarus, Kazakhstan, Turkey, USA, the European Free Trade Agreement members, Australia and Japan.

This thesis will determine the feasibility for European auto makers to nearshore the production of automotive components to Serbia. It will consider the impact of external factors such as economic, political, and social stability have when evaluating the competitiveness of Serbia as a hub for automotive parts production. It will also analyse different product types to decide which is the most feasible to manufacture in Serbia. To achieve this the following research questions will be answered:

1. Which type of component would be most feasible to nearshore production to Serbia?
2. How can parts manufacturers control the risks of doing business in Serbia and overcome barriers for profitable production?

## 1.2 Scope of Analysis

This dissertation will analyse the potential Serbia has to establish itself as a hub for automotive parts production in Europe. It will take into consideration the profitability of producing parts in Serbia and the risk associated with doing business in the country.

# 2. Literature Review

This section will analyse literature related to the problem statement and research questions. It will concentrate on the automotive industry in general and then, more specifically, on the automotive industry in Serbia. It will also comparatively examine nearshoring and offshoring as well as the risks and entry strategies for firms.

## 2.1 Automotive Industry

The history of the modern automobile can be traced to 1908 when Henry Ford created the Ford Model T. This disruption of manufacturing processes would see the Model T become the first mass produced automobile on a moving assembly line (Ford & Crowther, 1922). Firms in Europe and Asia also begin mass production and developing their own manufacturing strategies (Jurgens et. al, 1993).

During the mid-1980's and 1990's, the industry saw major restructuring in the way component production was organised (Schmitt & Van Biesebroeck, 2013). Traditional integrated production systems were sidelined for disintegrated supply chains to take hold (Schmitt & Van Biesebroeck, 2013). These "lean production systems", led by Japanese manufacturers, are now implemented by auto assemblers worldwide. Initially these changes allowed for the development of supply chain management systems and lower inventory costs (Schmitt & Van Biesebroeck, 2013). During this period, auto makers began to outsource the production of parts and sophisticated components. This increased the need to build and maintain relationships with external suppliers, who were now allowed more freedom and responsibility regarding the engineering, design and production of parts (Womack et. al, 1990).

By outsourcing the production of certain parts to specialised suppliers, automakers were able to focus more on the products and activities in which they excel (Corswant & Fredriksson, 2002). Globalisation of the auto industry has become prevalent for manufacturers worldwide and complex supply chains are at the centre of vehicle production (Sturgeon & Van Biesebroeck, 2011). The industry has seen consistent growth with 74.9 million cars sold in 2019, an increase from the average of 69.7 million throughout 2010-2018 (Wagner, 2020). China has become a key player in production of both parts and automobiles. Since 2009 it has overtaken the USA and Japan to become the biggest producer of vehicles in the world. In

2019 China produced 25.7 million vehicles, far more than 2nd place USA who produced 10.5 million (OICA, 2020). More impressively, over 70% of all automotive parts suppliers are doing business in China (Kim et. al, 2011).

## 2.2 Automotive Parts and the Global Supply Chain

The automotive parts supply industry has shifted over the years from a mass inhouse production model to outsourcing with heavy reliance on the globalised automotive supply chain (Corswant et. al, 2002). In particular, the European auto industry underwent considerable change throughout 90's as automakers made the switch to the lean manufacturing process. This shifted aspects of manufacturing and component development out of house, effectively increasing productivity and reducing costs (Womack et. al, 1990; Lamming, 1993). The shift, which can be attributed to an influx of Japanese investment and the formation of a single European market, put greater reliance on the supplier–manufacturer relationship as production became increasingly international (Larsson, 2002).

To cope with increased demand from automakers, the supply-sector was forced into a process of consolidation which developed hierarchically into three tiers. Tier 1 are major global suppliers who conduct their own research and development and assemble parts that are supplied directly to vehicle manufacturers. These suppliers usually maintain close relationships with manufacturers, providing them with finished components such as engines, transmissions, suspension systems and chassis (Coffin, 2019). Suppliers also often have assembly plants near manufacturing plants. Tier 2 suppliers supply components to tier 1 entities. Often these tier 2 suppliers specialise in manufacturing a type of component and may work within a wide number of industries, not solely within the automotive sector (Coffin, 2019). Tier 3 companies supply firms in the industry and occasionally supply manufacturers directly with the most basic components needed to manufacture an auto part. This can include anything from raw materials to engineered materials and specific parts such as switches or cables (Coffin, 2019). Within this hierarchy, a small number of large transnational suppliers occupy the top tier followed by multiple smaller companies in the lower tiers (Larsson, 2002). These first-tier suppliers have become manufacturers in their own right, utilising the lower tier suppliers for parts and increasing the need for cooperation and direct communication from the automakers (Frigate & Lung, 2002).

European auto makers apply the just-in-time (JIT) concept, where deliveries are timed to coordinate with the moment when they are needed, to organise the flow of parts from global automotive suppliers, regulate supply chain logistics, and to ensure accurate stock numbers. (Sadler, 1997). Reliance on international suppliers has grown as the need for local manufacturing diminished. Local suppliers generally manufacture bulky components which require low technological levels of skill (Larsson, 2002). In this regard, automakers established 'supplier parks' near assembly plants which are essentially small villages of warehouses that shorten logistic factors and reduce delays (Larsson, 2002). Brazil is an example where VW created a unified assembly with VW workers and suppliers sharing the same uniform and common work spaces, while occupying different buildings in the compound (Kotabe et. al, 2007). Ford in Brazil is another instance, contracting out the assembly of 90 modules to the TNT manufacturing facility which sits next to the Ford plant. TNT deliver timely components through a line-feed cart system which runs parallel with the assembly plant (Kotabe et. al, 2007). Adopting modular manufacturing offers a way to cut costs and increase integration with suppliers which in turn speeds up the process of new product development, allowing new models to hit the market faster. According to a manager at GM, modularity reduced the time from the design phase to a new car launch from 5 years to 18 months (Kotabe et. al, 2007). Automakers communicate directly with 1$^{st}$ tier suppliers and in some cases with 2$^{nd}$ tier suppliers also.

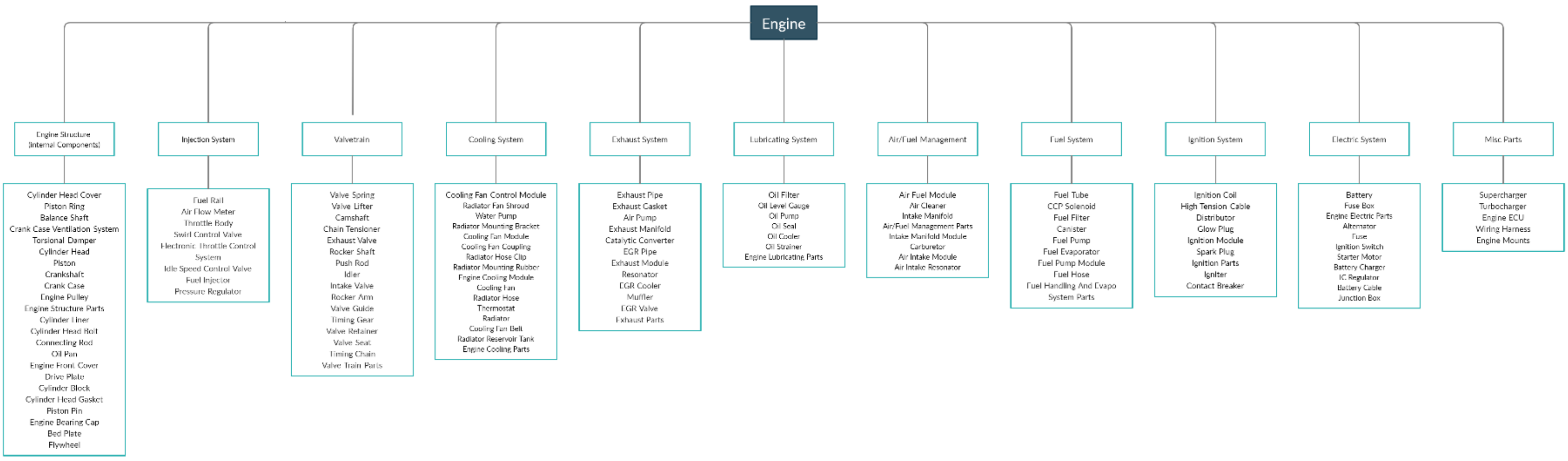
However, they have little knowledge or control over lower tiers. These suppliers often operate in emerging markets to take advantage of cheaper labour and more relaxed regulatory regimes while supplying to the 1$^{st}$ and 2$^{nd}$ tiers (Beske et. al, 2006). Another downside of this supply chain arrangement for automakers is lack of control over delays and suppliers' inability to meet quotas. For example, in Brazil where components for air conditioning, power steering and alloy wheels for 2 vehicle models (1 low end and 1 higher end) were not able to be delivered on time, forcing the dealers to alter lines because air condition components were only delivered for 60% of the vehicles (Thome et. al, 2014). The supplier-automaker relationship clearly is vital for the manufacturing process. Stock levels of components need to be maintained for manufacturing to occur on time. Therefore, the tier 1 relationship with suppliers who are tiers beneath them is critical for maintaining the just-in-time flow of components to assembly lines.

## 2.3 Automotive Component Categorization

The average car requires about 30,000 individual components, if counted down to the last screw. To better define and classify the various components that make up a car, we can split up the major assembled parts and the components required. The major parts can be considered as follows:

Engine, breaking system, suspension system (including steering and wheels), drivetrain (clutch, differential, automatic/manual transmission, 4WD transfer case (if applicable)), axels, break and body control, interior (interior trim, airbags, dashboard, seat, seatbelts, steering wheel, instrument switches), small and general parts (pipes, hoses, seals), body panels and exterior parts, electronics (sensors, relays, wiring harness) (Marklines, 2020).

These major parts have hundreds of individual components. Breaking down the engine, perhaps the most important and intricate part of a vehicle, is as follows (Marklines, 2020):



## 2.4 Serbia

Serbia, as part of ex-Yugoslavia, enjoyed an economic boom post World War 2. The country saw rapid growth through the 1950's to the end of the 1970's and was among the fastest growing countries in the world (Calic & Geyer, 2019). However, the death of Tito (the communist leader of Yugoslavia) saw communism weaken while ethnic tensions grew, leading the country into a recession. The rapid downfall of the economy can be attributed to loans taken out by Yugoslavia, including a $21 billion loan from the USA, a massive sum for a small nation which was impossible to repay (CIA, 1984). The level of financial mismanagement from the ruling elite also contributed to the country's slide into one of its worst recessions in history. From 1979-1985, real earnings in Yugoslavia fell by 25% (CIA, 1984). The late 80's saw a rise in Serbian nationalism that brought Slobodan Milosevic to power. He was the catalyst for the breakup of Yugoslavia caused by a civil war that plagued the region for the next decade, resulting in over 100,000 casualties (Calic & Geyer, 2019). Milosevic remained in power through years of protest, war crimes and corruption, until October of 2000 when he was finally overthrown (Calic & Geyer, 2019). During the 90's, during years of civil war, political unrest, and a boycott by the United Nations, the Serbian economy was at a historic low. Hyperinflation was the third worst ever recorded in history prices to doubling every 1.4 days.

In 2000 Serbia's economic revival began with the lifting of the UN sanctions and the country receiving foreign support and donations (Parezanin et. al, 2016). Through this transition, the Serbian economy began to catch up to other countries in Central and Eastern Europe, a fact largely attributable to FDI which amounted to €33.6 billion in 2000-14 (Dimitrijevic, 2017). The top three sources were Telenor (€1,602 mil), Gazprom Neft – NIS (€947 mil) and Fiat (€940 mil) (Parezanin et. al, 2016). Serbia has received large investment from China as part of its Belt and Road initiative. Chinese companies have developed infrastructure in Serbia including highways throughout the country, the Pupin bridge in Belgrade (Completed in 2014) and a high-speed rail line to Budapest (Commenced; to be completed in 2023 est.) (Dimitrijevic, 2017). These projects were completed as a joint venture with the help of various Chinese companies and loans secured from Chinese banks (Dimitrijevic, 2017). The end result is a much-needed update to Serbia's infrastructure, better connecting supply lines within the country and to the rest of Europe. Infrastructure and general economic growth has brought in additional investment from both private companies and foreign governments. This has allowed the Serbian economy to prosper and attract interest from all sides of the globe.

Foreign firms continue to establish footholds in Serbia, taking advantage of low-cost skilled labour, government rebates for investors who create new jobs in the economy and the lowest corporate tax rate in Europe (10%) (Santander, 2021).

## 2.5 Automotive Industry in Serbia

Serbia has a rich automotive history dating back to 1939 when assembly of military trucks began in the city of Kragujevac. Since then the small plant grew, after acquiring a licence from FIAT, into the giant automaker Zastava which went on to produce 4.5 million automobiles, exporting 650,000, during the next 55 years (RAS, 2020). Initially Zastava was simply a car assembly plant but over time it developed into a full-scale production facility, producing almost all the components, design modifications and independent design and development features for cars (RAS, 2020). This success created opportunities for independent part suppliers who began popping up all over ex-Yugoslavia. Parts produced were not only intended for the Zastava corporation but were also exported to Western Europe (RAS, 2020). Through this period of expansion, a supplier in Kikinda exported castings to Opel in Germany, in exchange for disassembled cars, and would go on to assemble 50,000 models including the Kaddett, Corsa, Vectra and Omega (RAS, 2020). In 1985, Zastava gave birth to the Yugo compact hatchback which would go on to become the highest selling Serbian made vehicle. Just under 800,000 were produced before the final car left the factory in November 2008. In the late 80's, Zastava launched a new hatchback called the Yugo Florida, designed to steer the company into a new age. However, with the breakup of Yugoslavia and severe sanctions placed on Serbia, the next 10 years of economic isolation would see the automotive industry slowly fade away (RAS, 2020).

Recently the automotive industry in Serbia has seen a resurgence. In 2008, the Zastava factory was acquired by FIAT accompanied by an investment of 940 million euros, completely overhauling the factory to produce the FIAT 500L with a production capacity of 300,000 cars per annum (RAS, 2020). Tier 1 suppliers, such as Adient and Sigit, established factories alongside FIAT in Kragujevac, taking advantage of logistics proximity and government support for investments in the industry (RAS, 2020). Soon brands such as Bosch, Michelin and Continental amongst others established their own factories, injecting much needed capital investment into the once stagnant industry. Today, Serbia houses a diverse range of part producers who make tires, turbochargers, electric drives, wiring harnesses, electric motors, bearings, seat covers and heaters, fuel or coolant hoses, various plastics and rubber or metal parts (RAS, 2020). Tires, wiring harnesses and wiper systems are the most produced part, with a production value respectively of 783.2, 666.7 and 246.8 million euros in 2018 (RAS, 2020). Labour-intensive components with a low-skill level required to assemble, such as wiring harnesses, are produced intensively in the country due to the cheap workforce comparative to other European nations (Pavlinek, 2015). The average monthly wage of assembly workers at the FIAT factory in Serbia is 290 euros, a third of what FIAT pays workers at its factory in Poland (Pavlinek, 2015). The automotive sector in Serbia has entered a new industrial age and is seeing constant growth, year over year. As of 2020, the industry accounts for 10% of Serbian foreign exports and employs 60,000 workers making it the most important industrial sector in Serbia today (RAS, 2020).

## 2.6 Offshoring

Offshore outsourcing is a means of reducing costs by utilising cheaper labour and ultimately achieving greater efficiency (Di Gregorio et al. 2009), allowing firms to operate more profitably. But it may also create a reliance upon the labour force of developing nations (Doh, 2005). With the Western world's increasing dependence on offshoring, concerns have been raised about threats to jobs in industrialised economies, many of which can now be outsourced for a fraction of the cost (Levy, 2005). However, offshoring is still considered advantageous to countries as it creates enormous opportunities to cut costs, optimise production and establish new markets; focusing on job losses may lose sight of the bigger picture (Farrell, 2005).

## 2.7 Offshoring in the Auto Part Industry

In the automotive sector, we can see the firsthand effects of offshoring. China accounts for 70% of growth globally in the industry during the past decade (Chu et. al, 2019). Typically, Chinese suppliers are involved in the production of basic parts and components, acting as suppliers to various foreign firms (Li et. al, 2016). These foreign firms "still lead in the production of the core technologies required to manufacture engines, transmissions and key components and parts" (Li et. al, 2016). Many auto part suppliers have established firms in China to take advantage of cheap labour and a skilled workforce, thereby creating a complex global automotive supply chain (Sturgeon & Van Biesebroeck, 2011). This has, in-turn, created a heavy reliance on Chinese suppliers for parts procurement. As seen in the COVID-19 global pandemic, automakers worldwide expecting parts from China were forced to halt production (White, 2020). Automakers must now develop risk management and loss mitigation strategies considering proximity to suppliers and the effects of supply chain disruption and bottlenecks (Ceryno et. al, 2015).

## 2.8 Nearshoring

Similar to offshoring, nearshoring is the process of moving production or services to another country. However, to avoid additional costs incurred by needing to adapt to different languages or cultures, and additional issues caused by distance, nearshoring entails moving firms to countries closer to a home base (Bock, 2006). Proximity reduces transportation costs and promotes more efficient networks for delivery and transport of goods.

## 2.9 Nearshoring the Production of Auto Parts

In the case of automakers, the current situation has the bulk of component production occurring in China and exported to automakers around the world (Kim et. al, 2011). For European automakers, a central hub in Europe will help them save money on transport and reduce supply chain complexities. The goal is to ensure that automotive supply chains do not end up disrupted by external factors. Further, ultimate reliance on a single country can result in major disruptions and additional unanticipated hidden costs (Ceryno et. al, 2015).

## 2.10 Risks in Emerging Markets

When entering an emerging market, certain risk factors must be considered. Political risk often arises due to volatility of the political climate (Diamonte et. al, 1996). Political risk also refers to abrupt changes in laws and regulations by the host country, which has adverse effects on firms. Emerging market adverse scenarios range from small inconveniences such as tariffs, to confiscation of assets without proper compensation, on the severe end of the spectrum (Johnson & Tellis, 2008). Financial and economic risks are also prevalent in emerging economies which tend to be more prone to instability. These factors impact on foreign firms as do recessions, market down-turns, currency crises, or sudden bursts of inflation (Johnson & Tellis, 2008).

# 3. Methodology

This section will address the problem statement and the methodology used to generate conclusive answers to the research questions. To answer the first research question, we focus on the use of quantitative and qualitative secondary data. The second research question will be answered from findings attained through expert interviews and additional supporting secondary data.

## 3.1 Qualitative Data

To evaluate and confirm the findings of the secondary data and obtain an expert understanding of both the industry and country, interviews were undertaken. Two types of experts were consulted: those who had experience working and co-ordinating foreign firms breaking ground in Serbia and specialists who are working for foreign companies manufacturing auto components in Serbia. Two interview sets were drafted with questions tailored for each type of expert, one set pertaining to the knowledge of the automotive industry and particular specific component production and the other corresponding to the knowledge of the social, political, and legislative climate when operating a business in Serbia. The interview sets are both semi-structured with guiding questions to allow for comparable data. However, there is flexibility to explore topics further based on the response of the interviewee to gain a more in-depth knowledge of the subject.

Experts who have experience working in the automotive industry in Serbia were asked these topics in addition to specific topics pertaining to parts production in Serbia. The topics explored were:

- Serbia as a hub for production
- Infrastructure and logistics
- Limitations

The data collected from these experts is used to support RQ1.

Experts who have experience opening firms in Serbia addressed the following topics to gain a better understanding of the social, political and legislative climate in the country:

- Bureaucratic and legislative expectations or issues
- Political climate and stability
- Evaluation of Serbian managers and workforce
- Overall businesses friendliness

Experts with experience working on projects in various emerging markets were also asked questions to form a comparison and evaluation of Serbia when compared with other emerging markets.

The data collected from these interviews is used to support secondary data and answer RQ2.

## 3.2 Secondary Data

To properly determine the best component to nearshore production, data was collected from previous research based on the production variables, costs and risks associated when operating in emerging markets. In particular, the research analysed is focused on vehicle component production in emerging markets to give a clear path in determining the best candidate for production in Serbia. It is important to note the limitations when using secondary data, primarily the origins and quality of the data. In this regard, the data collected will be from respected research authorities such as the Organization for Economic Co-Operation and Development (OECD), International Monetary Fund (IMF) and the World Economic Forum (WEF) amongst others.

## 3.3 Market Attractiveness

To analyse attractiveness of Serbia as a hub for manufacturing, external factors were considered beyond the primary elements. Political and social climates were examined along with circumstantial issues that may arise such as corruption and legislative bottlenecks. To accurately characterise the positive benefits and potentially negative aspects, the SWOT (Strengths, Weaknesses, Opportunities and Threats) framework, Porter's Five Forces and PESTEL analysis is utilised.

## 3.4 Evaluation of Components

When selecting which components to evaluate for production in Serbia, it is important to play to the strengths of the country, skills of its workers and history of producing goods. Three components will be evaluated. For a part to be considered the following criteria will be used:

- A history of production in Serbia
- Skill level required to manufacture
- Labour intensity

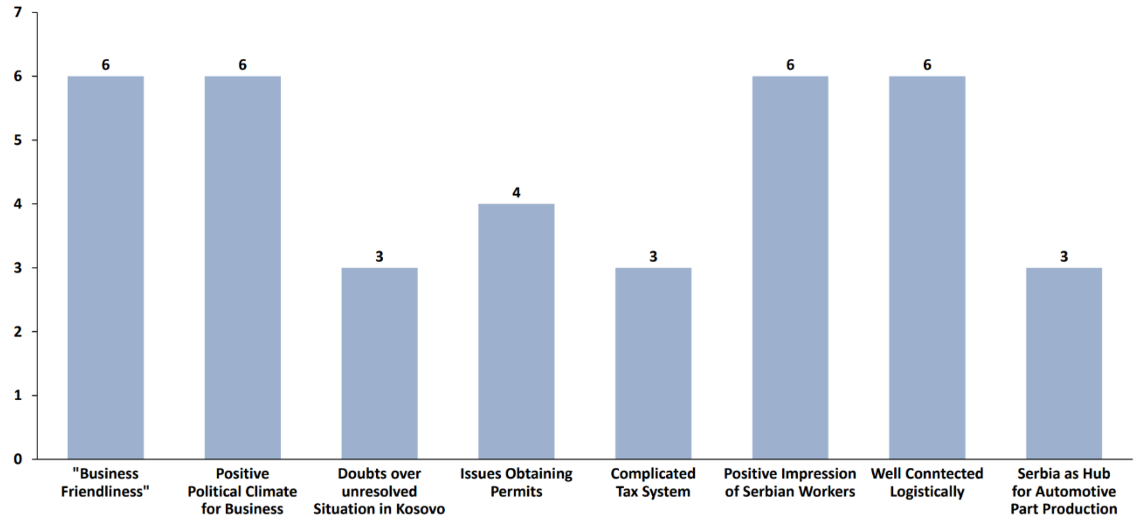
When nearshoring to emerging markets, generally the parts produced are labour intensive components which require a low skill level to produce (Nguyen et al. 2020). Considering this, the research will focus on evaluating the following components: Wiring Looms, Seats, Tyres & Rubber Parts

### 3.4.1 Component Feasibility Matrix

To answer RQ1, a matrix will be used to assess the feasibility of nearshoring the production of components to Serbia. This matrix will take into consideration labour intensity and manufacturing complexity of auto parts manufactures when evaluating the attractiveness of the Serbian market as a hub for part production. The 2x2 grid position matrix will be composed of analysis sections, providing a clear position for the evaluated components.

## 4. Findings

| | |
|---|---|
| Expert A | Advisory project manager at a global organisation specialising in projects in emerging markets |
| Expert B | Business development manager at a Serbian multinational corporation who has overseen many projects expanding to emerging markets |
| Expert C | Project manager at a multinational supermarket chain which recently expanded to Serbia |
| Expert D | A quality control manager for a foreign tier 1 automotive insulation supplier operating in Serbia |
| Expert E | Procurement specialist for a foreign tier 1 wiring harness supplier operating in Serbia |
| Expert F | Plant Manager for a foreign tier 1 Seating company operating in Serbia |




(Figure 1: Representation of interview key dimensions)

## 4.1 Foreign Market Specialist Interviews

To evaluate the market attractiveness of Serbia from the perspective of foreign companies, project managers from foreign multinational companies (operating in Serbia), Serbian multinational companies and global organisations were consulted. These interviewees were not required to have a background in the automotive industry; however, they have been involved with projects breaking ground in the Serbian market and other emerging markets. They offered their insights from a practical standpoint of the bureaucratic, political and managerial aspects and the overall "business friendliness" when opening and operating a business in Serbia.

### 4.1.1 Business Friendliness

The experts unanimously verified that Serbia is a good country to do business in. Common remarks amongst them were that Serbia, being a part of CEFTA free trade agreement allows companies to produce goods in Serbia and export to the EU easily and without additional incurred taxes. Also commented on the was the newly ratified free trade agreement Serbia has established with the EAEU. The interviewees saw this as another competitive advantage for foreign firms considering Serbia as it is the only country in Europe with this privilege. This openness to trade was positively looked upon by the firms when considering the Serbian market. Additionally, in line with findings from secondary research, the experts confirmed that driving factors for operating in Serbia were the low base wages, abundance of skilled workers and a nonunionized work force. All these factors together contribute to creating a favourable atmosphere for foreign investment.

### 4.1.2 Political Climate

The experts verified that the Serbian government is currently investing a large amount of resources into drawing in foreign investment (such as grants that are paid out to investors per new jobs created). This push to increase FDI's by the government has made a pro-investment environment which welcomes new business from a political standpoint. However, two weak points were noted by the experts. Experts A, C and E noted the unresolved situation in Kosovo was a point of contention for companies entering the Serbian market. This situation points towards political instability and was considered by firms evaluating the Serbian marketplace for investment. Ultimately, the organisations saw this as a low risk to their operations in the country as the consensus is that the problem will be resolved peacefully in due time. The second weak point brought up by Expert A was the prospect of Serbia entering the EU within the next 5-10 years. The probability of this happening is low, however not impossible. If it were to happen, firms might find themselves having a difficult time hiring skilled workers as many citizens may be inclined to leave Serbia for better pay and a higher standard of living in other EU nations. Wages in Serbia would rise as jobs become harder to fulfill due to the worker shortage which would in turn increase companies operating costs.

### 4.1.3 Bureaucratic and Legislative

The experts noted that there were few issues in obtaining permits and legitimising as a company from a bureaucratic standpoint. This is in part because of the Serbian governments eagerness to promote foreign investment. Experts A, B, C & D noted that the issues they experienced surrounding obtaining building permits were mild compared to the troubles they encountered in other emerging markets. These initial hurdles are quite minor and usually only appear during the initial entry phases. They are quickly overcome with relative ease as the government wants firms to become operational as quickly as possible to create new jobs and revenue. However, Experts C, D & E noted the complicated Serbian tax system caused headaches for their respective companies.

### 4.1.4 Evaluation of Serbian Managers and Workforce

From the experience of the experts, the comments towards Serbian managers and workforce have been favourable. The language barrier generally is not an issue for foreign firms as most tertiary educated Serbians speak English at a fluent level. Foreign companies operating in Serbia will usually hire Serbian managers for low and mid level positions. The experts all agreed that the competency of Serbian managers is high and that filing positions with competent managers is possible. However, Serbian mangers lack the necessary experience required for top level positions. For this reason, most foreign firms operating in the country will have top level positions filled by managers from different countries. The experts all agreed that the productivity level of the Serbian workforce is at an acceptable level, on par with other European nations. Expert A noted that for many Serbian people, a job at a foreign company is seen as a prestige position. The salaries are generally 5-10% higher than those of Serbian companies (depending on position and industry) however the workplace culture and benefits are far superior to those of Serbian companies. This translates to a productive and motivated workforce who are happy having a stable job, good salary and a positive workplace culture where they feel respected.

### 4.1.5 Serbia Compared to other Emerging Markets

Expert B has extensive experience overseeing projects which break ground in emerging markets. He states that Serbia has a much better climate for business than in many of the countries he has overseen projects in. For example, in Africa (Angola, Zambia, Mozambique), where his company undertook a greenfield investment, corruption and political instability were rife. It seemed that the governing bodies were actively trying to make the integration as difficult and expensive as possible, ultimately leaving the firm to rely on diplomatic contacts to resolve issues. Finding skilled workers, even at an entry level, was a difficult task and attempts to have African managers and directors working in the company proved to be unsuccessful in the long run. Managers from Serbia were brought in to fill the positions and keep the project on track.

Other European markets (Albania, Kosovo & North Macedonia) had similar issues surrounding corruption, however to a smaller extent than the issues experienced in Africa. Finding skilled workers in these countries however was generally not an issue. He did note that a level of corruption exists in Serbia as well, however at a relatively small level in comparison. He felt that if a company were entering the market and creating jobs, it would have the support of the government and would run into minimal issues. The presence of a Serbian manager would be beneficial and required, one that understands the system and bureaucratic procedures, to navigate any issues that do arise.

## 4.2 Automotive Industry Expert Interviews

To evaluate the potential for Serbia to serve as an automotive hub in Europe, three experts working for foreign tier 1 automotive parts suppliers (operating in Serbia) were interviewed. These experts have experience working in part production in Serbia and other European nations. They offered their insights on the production of auto parts in the Serbian market from both a personal and organisational level.

### 4.2.1 Serbia as a Hub for Production

The experts confirmed that Serbia has the tools in place to serve as a base for automotive parts production. They noted the low fixed costs in Serbia compared to other countries in Europe as a major point of revenue and compared to other production locations throughout Europe, the Serbian market is the most profitable for production. Serbian workers compare well to those working similar jobs in other countries. Foreign firms generally pay slightly higher than Serbian firms and offer better workplace conditions and benefits which incentivises workers and increases their productivity. The experts also noted that employing and retaining workers has been a smooth process due to the relatively high unemployment rate in Serbia.

### 4.2.2 Infrastructure and Logistics

The experts noted that supply lines to Serbia are well connected allowing for a streamlined process when importing materials or exporting goods. Dependant on the part being produced, the raw materials may be procured directly from Serbian suppliers or imported from neighbouring countries depending on availability. The experts confirmed that Serbia's central location allows for goods to be delivered in a timely manner which ensures that the firms can meet deadlines and quotas.

### 4.2.3 Limitations

In the opinion of the experts interviewed, Serbia can serve as a hub for automotive production in Europe. However, it is still a relatively untapped market and requires more producers to establish themselves in the country to further develop the industry. Entry level workers, junior managers and mid level managers are easily found and employed by auto part suppliers. The interviewees agreed that Serbia does lack top level managers in the auto industry. This lack of experience can be attributed to the stagnation of the auto industry in the region from the 1990's and early 2000's. To combat this, auto suppliers tend to bring in their own top-level managers to run the companies. Auto companies can function without issue in Serbia with foreign managers occupying the top positions as the country has a high level of English speakers, especially amongst the younger generation. Serbian managers are required at the junior level, especially those who communicate directly to the workers.

The experts also verified there are few limitations on the parts that can be produced profitably in Serbia. Companies in generally bring their own technology, operational culture and 'know how' which becomes integrated with the employees. The parts produced in Serbia retain the same quality as those produced in their other factories throughout Europe.

## 4.3 Serbian Economic Review

In 2019, Serbia achieved a nominal GDP of 46.034 billion euros (5418 billion dinars) translating to a GDP per capita of €6207.69 and an unemployment rate of 10.9% (IMF, 2021). The industrial sector which includes automotive accounts for roughly 25.6 % of the country's GDP (Santander, 2021) and the automotive sector alone attributes to about 10% of Serbian exports (RAS, 2020). This is a steady increase from the past 3 years:

| Year | 2016 | 2017 | 2018 |
|---|---|---|---|
| GDP | 38.467 billion euros | 40.446 billion euros | 43.1 billion euros |
| GDP Per Capita | €4841.42 | €5284.83 | €6090.19 |
| Unemployment Rate | 15.9% | 14.1% | 13.3% |

(IMF, 2021)

Although the country is showing continual growth and development in the economic sector, unemployment is still high, and many citizens live beneath the poverty line. In 2017, the average wage in the country (excluding Kosovo) was €514.34 per month and a minimum wage of €233 (UNECE, 2017). In the automotive sector, the average wage was reported as €385.2 per month in 2018 (RAS, 2020).

From a business standpoint, Serbia benefits from one of the lowest energy costs in Europe €0.067 kWh (RAS, 2020). The WEF global competitiveness report (2019) ranks Serbia 72nd out of 141. For business dynamism the report puts Serbia 54th, costs of starting a business 45th, time required to start a business 27th and an openness to trade ranking of 51. The World Bank (2021) ranks Serbia in an easy of doing business index 44th including 9th for dealing with construction permits and 23rd for trading across borders. This solidifies the governments ambition of promoting Serbia as a "business friendly" nation to attract foreign direct investment.

### 4.3.1 Grants for Foreign Direct Investment (FDI)

In the Serbian governments attempt to attract FDI's, greenfield and brownfield investments are heavily subsidised. The main benefits include a tax holiday which is available for investors who:

1) Invest more than €8.5 million.
2) Employ 100 or more new employees for an indefinite period during the period of investment.

If these conditions are met, the tax holiday begins when the company starts making profit and lasts 10 years (Deloitte, 2020).

Employing workers who are registered with the national unemployment agency offers a sizable relief on the taxes paid on net salary:

| | |
|---|---|
| 1-9 new jobs | 65% Reduction |
| 10-99 new jobs | 70% Reduction |
| 100+ new jobs | 75% Reduction |

(Deloitte, 2020)

Additionally, new investors can apply for a grant from the state for each new job created. The jobs must be created within 3 years of the initial application for the grant with the possibility of an additional 2-year extension (Deloitte, 2020). Investors can choose the basis on which funds will be granted out of the following options:

1) Eligible costs for investing in fixed and intangible assets (up to 50% of total eligible costs for large enterprises and 100% of total eligible costs for small to medium sized enterprises).
2) 20 to 40% of eligible 2-year gross salary costs for each new job created (maximum amount ranging from 3000-7000 euro per new job).

(Deloitte, 2020)

### 4.3.2 History of FDI's in Serbia

During the 90's, following years of civil war, political unrest and a boycott by the United Nations (UN), the Serbian economy was at an historic low. The rate of hyperinflation was the third worst ever recorded in history with the time required for prices to double taking only 1.4 days. 2000 can be considered the beginning of Serbia's economic revival with the lifting of the UN sanctions and the country receiving foreign support and donations (Parezanin et. al, 2016). Through this transition process, the Serbian economy has begun to catch up to that of other countries in Central and Eastern Europe and this can largely be attributed to the FDI's (Dimitrijevic, 2017). In this period, from 2000 to 2014, the total estimated FDI's amount to about €33.6 billion. The bulk of these investments came from companies in Europe with the top three being Telenor (€1,602 mil), Gazprom Neft – NIS (€947 mil) and Fiat (€940 mil) (Parezanin et. al, 2016). Serbia has received large investment from China as part of its Belt and Road initiative. Chinese companies have helped develop various infrastructure in Serbia including highways throughout the country, the Pupin bridge in Belgrade (completed in 2014) and a high-speed rail line to Budapest (commenced; to be completed in 2023 est.) (Dimitrijevic, 2017). These projects were completed as a joint venture with the help of various Chinese companies and loans secured from Chinese banks (Dimitrijevic, 2017). The end result is a much needed update to Serbia's infrastructure, better connecting supply lines within the country and to the rest of Europe. Serbia has also seen investment from the UAE with Etihad Airways purchasing 49% of Air Serbia (51% being Serbian government owned)

(Bartlett et. al, 2017). The UAE has also undertaken a joint-venture with the Serbian government to develop 9000 hectares of farmland in Vojvodina (Bartlett et. al, 2017). Most recently in April 2015, the Abu Dhabi based development company Eagle Hills has committed to invest up to €3 billion in the Belgrade Waterfront project. The project is set to redevelop a 1.8 million square meter site on the Sava river and will include various apartment buildings (5,700 apartments total), 8 hotels and a 140,000 square meter shopping centre (the biggest in the Balkans) (Bartlett et. al, 2017). Construction of this mammoth project will span over the course of 30 years with Eagle Hills owning 68% of the project and the remaining 32% being owned by the Serbia government (Bartlett et. al, 2017). As seen from these examples, investment from both private companies and foreign governments has allowed the Serbian economy to prosper and attract interest from all sides of the globe.

### 4.3.3 Entry Strategies for Emerging Markets

When considering entry strategies for emerging markets, firms must take into account risk factors. Often it is important for larger firms to establish relationships with smaller local firms and use their knowledge of the market and expertise to ensure a smooth transition (London & Hart, 2004). These partners can also guide the entering firm with their understanding of local customs, laws and regulations (London & Hart, 2004). Meyer et. al (2009) confirms this by stating that when a corporation enters an emerging economy, they can choose one of three entry strategies involving foreign direct investment (FDI), greenfield, acquisition or joint venture. Their results state that if firms require intangible local resource, joint ventures can be considered an optimal entry strategy because they are exposed to product related inefficiencies in the market. However, greenfield and acquisition are encouraged as entry strategies by firms seeking to strengthen their institutional environment directly (Meyer et. al, 2009).

### 4.3.4 Serbian Taxation System (KEPU Book)

The Serbian taxation system differs from the EU in a way which causes issues for many companies entering the market. The country mandates the recording of goods purchased, sold and produced utilising the KEPU book method. Every single item bought, produced, or sold, regardless of the operation scale must be recorded in the book. Furthermore, receipts must be kept for items recorded in the book. The convoluted system has caused problems for firms when switching from a more standardised EU tax system. Training and specialised software is required to navigate the system and for multinational companies there may be issues syncing the KEPU book tax system to that of their home nations.

## 4.4 Automotive Part Evaluation

### 4.4.1 Wiring Harness

The assembly of a wiring harness is an intricate, time consuming task which is done almost entirely (about 95%) manually. This leads to increased labour costs and a higher chance of defects compared to other vehicle parts (Heisler, 2017). Currently in Serbia, wiring harnesses are the 2$^{nd}$ most produced automotive part with a production value of 666.7 million euros in 2018 (RAS, 2020). Many tier 1 and 2 harness manufacturers have begun operating in the country within the past decade with some opening multiple factories. These include world leading harness manufacturers such as Leoni, Yazaki, Aptiv and Lear corporation amongst others.

The wiring harness is a vital part connecting the engine and car electronics to the vehicles central control unit. It is a complex part consisting of many wires, clamps and tubing, however most of the cost associated with production is the manual labour. The harness can be considered a low skilled part to produce and therefore workers are easily trained in the assembly process. Serbia currently has a high rate of unemployment and one of the lowest minimum and average wages in the automotive sector in Europe at 233 and 385.2 euros per month respectively. The combination of these elements makes Serbia a desirable location to produce wiring harnesses.

### 4.4.2 Tyres and Rubber Parts

Tyres are the most produced car part in Serbia with a production value of 783.2 million euros annually (RAS, 2020). The past decade has seen major greenfield investments and acquisitions in the country from world leading tyre companies such as Michelin, Cooper, Toyo and Linglong. Due to the materials and plastics used, production of tyres and rubber parts is harmful to the environment. Tyre, likewise are a labour intensive part to produce. The pollution generated from production leads to negative effects including ozone layer depletion, consumption of fossil fuels and impacts on climate change (Piotrowska et al. 2019). Serbia has much more relaxed laws and regulations surrounding pollution and emissions than other countries in Europe (United Nations, 2015). Companies can take advantage of the relaxed standards when opening and operating in the country. Linglong, for example, received considerable leeway from the government when they failed to submit an Environmental Impact Assessment report on time. They could continue with the opening of the factory and were granted extra time to deliver the compiled report (Balkan Green Energy News, 2020).

### 4.4.3 Seats

Vehicle seat suppliers are located close to the assembly line, usually within one hour. This is done to facilitate the just-in-time assembly process most manufacturers utilise, installing seats within minutes of receiving them from the supplier. However, if the individual parts of a seat are broken down, we are left with many basic labour-intensive tasks (such as cutting and sewing) required to produce these parts. These include leather or fabric covers, foam padding, a metal frame and controls and motors for seat position and temperature. These parts are often produced in low-wage countries and then sent to the seat supplier for assembly. Serbia produced seat covers to a value of 143.9 million euros in 2018 (RAS, 2020). Aunde, a German world leading producer of seat covers opened its factory in Serbia in 2015, producing covers for Fiat and Mercedes. Serbia's location in Europe with well connected supply lines to other EU countries, coupled with low wages and a history of producing seat covers positions it as a competitive location for suppliers searching for a base in Europe to establish production.

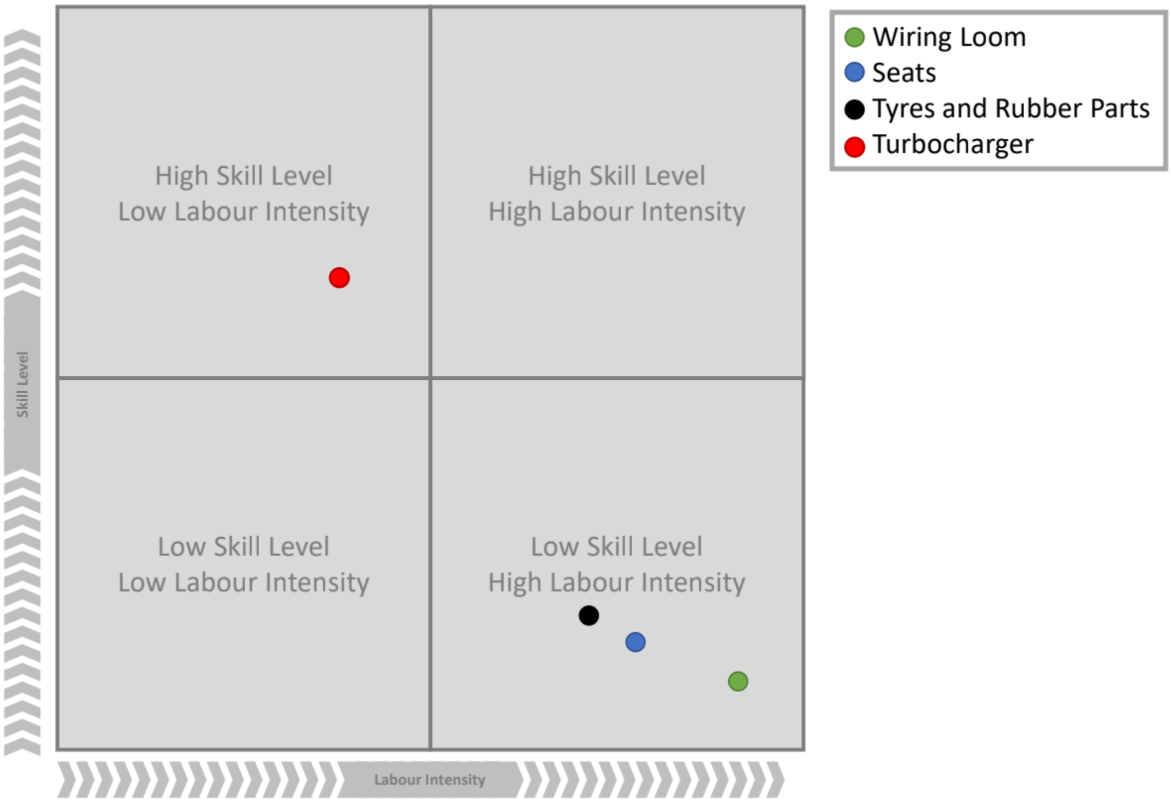
### 4.4.4 General Part Production in Serbia

Serbia has a rich history of automotive production and experience in producing almost all parts of a vehicle. During interviews, the experts have commented that there is no limitation on the type of part that can be produced in Serbia. New companies establishing themselves in the market generally bring with them the necessary technology and "know how" to manufacture the parts. Serbia has proven in the past decade that it can produce a range of high-quality auto parts for world leading suppliers. Serbia also has an abundance of both skilled workers and unskilled labourers ready to fill positions at newly opened companies. Mei Ta, a Chinese producer of turbochargers and castings (which require a high skill level to produce), has opened factories in Serbia which serve as their European base. Therefore, there is no limitation on the exact type of part that can be manufactured in the country, however it can be said that low-skilled, labour intensive parts are the most likely to be produced in the country.

# 5. Analysis

## 5.1 Part Selection

To answer RQ1, the evaluated car parts will be positioned and compared in a grid matrix.




(Figure 2: Matrix positioning grid)

This simple matrix positioning grid can give a visual representation of the parts analysed. Although all the parts analysed are produced in Serbia through various suppliers, the most profitable parts for production are those which require a low skill level to produce coupled with a high labour intensity (LSHI). In this case it can be said that the wiring loom is the part most suited for production in Serbia. This is not to say other parts will have a worse chance of successful production. It should be noted that firms producing high skill, low labour intensive (HSLI) parts such as turbochargers can do so successfully. However, from an entry standpoint and ease of establishing a means of profitable production, LSHI parts have proved to be the best candidate for manufacturing.

## 5.2 SWOT – Analysis of Serbia

To answer RQ2, a SWOT analysis will be used to compile the findings and insights from expert interviews and research. The goal of this analysis is to evaluate the attractiveness of Serbia as a country for foreign direct investment in the automotive sector. It will also cover the potential risks and threats for companies considering operating in the region.

### 5.2.1 Strengths

Serbia currently has one of the lowest average wages in Europe. For companies wanting to nearshore production of labour-intensive products this is a natural draw to the region. Trade agreements with the EU and Russia give companies a streamlined lined process of exporting goods to the rest of Europe without any incurred taxes. Serbia also has one of the lowest corporate tax rates in Europe at 10% (Santander, 2021) and the infrastructure in place to be able to move goods quickly and efficiently. The population is highly educated of which many speak English, and a large rate of unemployment allows for an ease of recruitment in low level management, skilled worker and unskilled labour positions. Additionally, a history of production in all aspects of the automotive sector give a general starting base in terms of trade knowledge and existing infrastructure which can be modernized and repurposed.

### 5.2.2 Weaknesses

Companies have experienced difficulties navigating the Serbian tax system. The tax system differentiates itself from that of the EU. For foreign companies, specifically during the opening phase, the system appears as a hurdle and poses difficulties to becoming operational. Likewise, the process for having permits granted for the construction of buildings and warehouses has caused issues for some companies. In the sense of becoming operational, these problems are solved with relative ease. One weakness noted is the population in Serbia which is just under 7 million (IMF, 2020). This causes issues for larger firms waiting to open full scale operations of mass production. In some cases, depending on the labour required and scale of the operation, it may be difficult to fill entry level positions.

### 5.2.3 Opportunities

Serbia, from an automotive standpoint, still appears as a relatively untapped market. Multinational firms have slowly started to take advantage of the region in the past decade. For companies looking to expand and set up base in the country now is a great time to take advantage of the situation. The Serbian government is eager to promote the country as an automotive production hub and has shown willingness to assist firms in becoming operational. One of the ways they do this is by offering rebates to new businesses opening which ultimately leads to a political climate that is very “business friendly”.

### 5.2.4 Threats

Generally, the political climate in Serbia is quite stable and has been so for the past decade. However, the unresolved situation in Kosovo still appears as a point of instability in the region. Expert C commented that his company considered the political situation in the region when expanding and chose Serbia over other nations for its perceived political stability. He noted though that they specifically chose not to operate in Kosovo due the instability between the territories. Serbia is currently not a member of the EU, however the country is currently in the application process. Expert A commentated, that although very unlikely, within the next 5 years the country could be accepted. EU acceptance would mean that Serbian citizens could work in other EU countries without visas. This could pose a potential drought of available workers (both skilled and basic labourers) as many may leave to work in different countries, in search of a better life and wage. Additionally, the lack of available workforce would cause wages in Serbia to increase, lowering the profitability for operating companies.

## 5.3 Porter’s Five Forces – Analysis of the Serbian Automotive Industry

To examine the competitiveness of the Serbian market, in particular the automotive industry, an analysis of the data was conducted utilising Porter’s Five Forces.

### 5.3.1 Threat of New Entrants

The addition of new players in the automotive industry in Serbia will see the marketplace grow in competitiveness. The initial and major entrance barrier for firms in the industry is the high capital investment required. Firms will more than likely be looking at a greenfield or brownfield investment when considering opening factories in Serbia. To combat this and encourage new entrants, the Serbian government has offered rebates for the creation of jobs and corporate tax holidays for foreign investors. This takes away some of the costs from the high investment requirements during the initial phases when opening a business in the country. Naturally as the auto industry continues to develop in Serbia, new entrants will become present in the market. Down the line if the industry grows exponentially, the competition for human capital will also present a barrier to entry. Although with most firms in the industry, location is not a key issue and logistically Serbia is well connected. Therefore, there will always be the option of opening factories in parts of Serbia where unemployment levels are higher.

### 5.3.2 Threat of Substitutes

Within the automotive industry, the threat of substitutes is always present. The consistent growth of the automotive industry has seen car sales increase year by year, contributing to significant growth and expansion of the auto supply industry. Most auto manufacturers already work with their preferred suppliers. Their relationships with these suppliers which have been built up and maintained throughout the years have allowed the companies to reach a solid understanding of product quality and consistent innovation. For this reason, it is hard for an unestablished substitute to enter the market directly without any prior connection to an auto manufacturer.

### 5.3.3 Bargaining Power of Customers

In general, in the automotive industry, the buying power is lies on the side of the automotive manufacturers. Although for most parts substitutes are prevalent, auto manufacturers tend to work with select suppliers whom they trust. The companies share a relationship working together closely to develop a product that meets all the criteria (high quality, design, integration with the final product and price). The industry remains competitive as auto manufacturers have many options to choose from when doing business. For this reason, it is imperative that parts manufacturers have a good relationship with auto makers, manufacturing a product that is attractively priced without sacrificing quality. Auto makers are reluctant to switch from their trusted suppliers however if a substitute does appear and can manufacture a product of equal or better quality for a lower price there can be a change in the relationship. Producing the goods in a market where firms can minimise costs (fixed costs and wages) and maximise profit allows part manufacturers to remain competitive against newcomers in the industry.

### 5.3.4 Bargaining Power of Suppliers

For auto part manufactures, the suppliers provide the raw materials used to manufacture the parts. Companies can choose to either procure the materials within the country or import as needed, both are viable options. The cost of switching suppliers is low, leaving the power in the hands of the buyers. The availability or scarcity of raw materials can cause the price to fluctuate which is something to be taken into account by the buyers.

### 5.3.5 Competitive Rivalry

Competition is prevalent within certain parts in the automotive industry in Serbia, however it is generally low. In this relatively young industry, there are currently 10 different wiring harness manufacturers operating in the market. For the most part these factories are concentrated on making the product for a specific automobile or manufacturer. Therefore, they mostly operate independently and do not share the same customer base. In the tyre industry in Serbia, there is currently 5 different manufactures operating in the country. Their level of competition is higher than that of the harness manufactures but can still be considered low. Tyre manufactures tend to have target markets that are more loyal to the brand name and different manufacturers produce tyres for different consumer markets. Their products also tend to be differentiated with some manufacturers making entry level, low end tyres and others more focused on mid to high end products.

## 5.4 PESTEL – Analysis of Serbia

To give a representation of the pros and cons of the Serbian market and paint a clear picture for companies looking to enter, a PESTEL analysis of the country was completed and displayed on the graphic below.


(Figure 3: PESTEL Analysis)

# 6. Conclusion

## 6.1 Research Question 1

The analysis of parts currently produced in Serbia has shown that the country has the necessary means to produce quality automotive parts. Currently, suppliers in Serbia operate producing almost all the parts required to make a car. To best take advantage of the strengths of the country, it would be recommended for companies to produce low skill level, high labour intensity parts. Out of the parts analysed, wiring harnesses, seats, tyres and rubber parts, are all viable candidates for production in a fast-expanding industry in the region. Serbia has a history of making these parts at a high standard for various world leading suppliers. Companies looking to expand should seek to take advantage of the abundance of low-cost skilled workers and labourers available in the country to maximise the profitability of production. As previously stated, it should be noted that there is no limitation on the type of part that can be produced in the country, as can be seen with the production of turbochargers. However, for more niche and technical parts such as turbochargers, more research must be conducted into the specific logistical costs required to set up a factory with the required technological and industrial machinery.

## 6.2 Research Question 2

The automotive sector in Serbia has seen massive expansion in the past decade after years of stagnation due to sanctions, turmoil in the region and political instability. Currently the political climate in the country is stable and the Serbian government is making a push for foreign investment by offering rebates to firms for creating jobs. Their eagerness to facilitate firms entering the market has contributed to a “business friendly” climate. Suppliers looking to expand their production in Europe should consider Serbia as a base and take advantage of the governments desire to push Serbia as a hub for automotive part production. Both greenfield, brownfield and acquisition entry methods seem to be preferred by firms entering the country in the past decade which is supported by the literature.

As with any emerging markets, there are existing risk factors. In Serbia, weak points which have been mentioned are the complicated tax system, issues obtaining permits and the ongoing conflict in Kosovo. The tax system issues and obtaining permits are solved with relative ease and do not seem to dissuade companies from operating in Serbia. However, the unresolved situation in Kosovo has in the past stopped firms from investing in the country. The situation is peaceful and heading towards a resolution however for some firms it is still a point of contention when deciding whether to invest in the country. For most firms however this is a calculated risk which they do not see as posing a threat to their ability to do business in the country.

## 7. Limitations and Further Research

The research conducted on car parts serves as a good baseline indicator on the success of production in Serbia. However, uncovering concrete figures on the cost of manufacturing certain parts and profitability from producing in various regions was harder to locate than first anticipated. For a more detailed comparison of the profitability of part manufacturing it would be recommended to uncover the exact figures surrounding the costs of production of specific parts.

The main conclusions were drawn from the opinions of expert who worked in the automobile industry and had experience working in Serbia. Although 6 high quality interviews were conducted with experts who had worked considerable years in the industry, more interviews would allow for a wider set of data to be analysed. Interviewing experts working in the industry in comparative emerging markets (Croatia, Slovenia, Bulgaria, Romania and Turkey amongst others) would allow for a better comparison of countries and ranking in regard to competitiveness. Overall this would allow for a more comprehensive analysis of potential auto part production hubs in Europe and an evaluation of their pros and cons.

Obtaining interviews from workers currently employed in Serbia was difficult as there tended to be a general distrust of the request unless it was a recommendation from a trusted source. This can be attributed to a general distrust in society from unknown sources which is common in post-communist nations and company policies surrounding the disclosure of information. Even with complete anonymity assured, many potential interviewees still declined to partake in an interview.

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## 9. Appendices

Interview Q's Set 1 (Foreign companies who are operating/investing in Serbia)

1. How long have you been working within the (specify industry depending on the interviewee) industry?
   a. Follow up: Have you been based solely in Serbia or have you worked in other countries?
2. When (Company you work for) decided to enter the Serbian market, what were the main factors drawing you to the country?
3. Did you evaluate any other potential markets in central Eastern Europe before settling on Serbia?
   a. (if so) What swayed you towards the Serbian market?
4. Were there significant efforts from the Serbian government to entice your entry to the market, possibly in the form of rebates or subsidies?
   a. How much did that play into the decision to establish barries in Serbia?
5. Did (Company) take into account the political climate or stability when entering the Serbian market?
   a. Did the political climate present a "business friendly" marketplace to operate in?
6. From a legislative standpoint, did you run into any issues due to regulations, red tape, or legal requirements during the opening phase?
7. How long did it take from the commitment of entry to the market to becoming operational?
   a. What sort of issues did you experience if any?
   b. Where there any risks you considered?
8. In your opinion, was the government accommodating in terms of assisting the company to meet all the legal requirements and regulations to become operational?
9. Logistically, do you feel Serbia is well connected internally and to the rest of Europe?
   a. Have you experienced any issues maintaining the supply chain?
10. Role of the Serbian manager in a foreign company:
    a. Does the workplace function without a Serbian manager (language barrier etc.)?
    b. In the workplace structure, do you report to Serbian managers or ones from different nations?
    c. Is it hard to find competent Serbian managers?
11. During your recruitment process, did you feel there were many skilled applicants applying for the job or was it a struggle to find adequate workers?
    a. How does the educational or skill level of workers in Serbia compare to (Country company is based in)?
    b. Does the wage gap allow for an optimised organisational structure in terms of productivity and profit?
12. How do you rate the productivity of Serbian workers compared to those in other countries you produce in?
13. From an operational standpoint, do you feel Serbia is a good country to operate in?
    a. Are there any hidden issues which firms entering the market may not be aware of?

b. Have you experienced any other problems while operating in Serbia?

Additional specific Q's (For foreign part manufactures operating in Serbia)

1. Do you produce (x part) in any other country?
    a. How do the operational costs of (x country) compare to those in Serbia?
    b. In comparison to other countries you are producing parts in, how does Serbia compare in terms of productivity and profitability?
2. Do you source raw materials locally or are they imported?
    a. Did you encounter any logistical issues in procuring raw materials?
3. How do you rate the level of quality control in products produced in Serbia?
4. Do you feel there are limitations on the type of vehicle components that can be produced in Serbia?
5. In Serbia workplaces are generally non-unionised, was this a factor you considered when deciding to operate in Serbia?
6. Do you feel Serbia has the infrastructure in place to become a hub for auto part production in Europe?