20. **The big opportunity for Serbia is the prospect of EU membership, but there are also other opportunities for it to exploit its revealed comparative advantages.** To this end, this part of the report analyzes the current pattern of Serbian exports and suggests sectors where exports could be increased. Chapter 2 looks at Serbian export performance over the last decade, including products and geographical concentration of exports, and reviews Serbia’s trade policies. Chapter 3 presents the findings of a product space analysis that identifies Serbian products that offer the greatest potential for export. Based on the findings of the product space analysis and taking into consideration the history of Serbian economic development, the report zeroes in on two sectors, industry in Chapter 4 and agriculture in Chapter 5.

### Chapter 2: Trade Performance and Policy

21. **Serbia’s exports grew fast in the first decade of transition, but the share of exports in its GDP is well below that of comparator countries.** Average annual growth of goods exports in 2000–10 was about 17 percent in euro terms.\(^3\) As a result, the share of exports in Serbia’s GDP increased from about 15 to 25 percent, far below that of Central and Eastern European Countries (CEEC).\(^4\) The growth of exports resulted from, among other factors, the reopening of the Serbian economy after years of isolation, the restructuring of the real sector of the economy, including some successful privatizations, and the inflow of foreign direct investment (FDI).

22. **The growth in exports masks weaknesses that are revealed by a closer look at product and the geographical concentration of Serbia’s exports.** The exports growing fastest tended to be low-value-added products: almost two-thirds were raw materials, while consumer goods accounted for just 30 percent (Figure 2.1). Serbia primarily exported metals, plastics, and some agriculture products (Figure 2.2).

23. **Almost 90 percent of Serbian exports go to Europe—55 percent to the EU and about one third to the CEFTA region**\(^5\) (Figure 2.3). There has been little change in the pattern over the last decade. Within the EU, Serbian exporters mainly trade with the old EU member states\(^6\) (EU15), though this has been changing in recent years (Figure 2.4). Overall, the EU share has been marginally declining and the CEFTA share taking up the slack. Such geographical concentration makes Serbia highly sensitive to economic developments in Europe. Therefore one policy

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\(^3\) In dollar terms average annual growth rate was about 21 percent.

\(^4\) This report uses the Czech Republic, Hungary, and Slovakia as CEEC comparators.

\(^5\) CEFTA is a trade agreement between countries in South East Europe that has replaced bilateral agreements between Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Moldova, Montenegro, Serbia, and UNMIK/Kosovo.

\(^6\) These countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom.
recommendation would be to explore options for further expansion of exports to other emerging markets, outside Europe.

Figure 2.1: Trade by Broad Economic Categories

Figure 2.2: Trade by SITC Classification

Source: NBS

Figure 2.3: Destination Averages, 2004–08

Figure 2.4: Destination Shares, 2001 and 2010

Note: EU – European Union; CEFTA – Central European Free Trade Agreement; CIS – Commonwealth of Independent States

Source: NBS.

24. **Exports of services could gain in importance.** Even though this report does not discuss services, they may become more important for Serbia’s external position. Over the last five years, Serbia annually earned € 2.4 billion (US$3.3 billion) from service exports. Pre-crisis they grew 33 percent annually before declining by 13 percent in 2009. Thus, their share in GDP nearly doubled over the previous decade, from 5 percent of GDP in 2001 to 9.2 percent in 2010. But the net effect on Serbia’s current account was close to zero, because services imports were also growing fast. The share of service imports in GDP has nearly tripled since 2001, from 3.2 percent to 9.2 percent. As a result, from 2005 to 2008 Serbia had a negative balance in trade in services that averaged 0.4 percent of GDP a year, though for the last two years trade in services was again balanced.
25. **Serbia has liberalized its foreign trade policy significantly.** Since the transition began in 2001, Serbia has introduced a number of measures that demonstrate its commitment to opening up its market to foreign goods and tapping into opportunities abroad. Liberalization of the foreign trade regime, with deregulation of trade, was one of the pillars of post-2000 reforms. In the first two years of transition Serbia halved its tariffs and started negotiating free trade agreements. Currently, it is a signature party to CEFTA and has favorable bilateral trade agreements with the EU, Russia, countries of EFTA, Turkey, Kazakhstan, and Belarus. Since 2004, Serbia has been working on accession to the WTO and entered the final accession stage in October 2010.
Chapter 3:
Which Products Could Serbia Export?

26. **What exports should Serbia develop?** One way is to let the market decide, but that is not the road most of today’s emerging exporters have taken. Typically, they adopted a strategy. Serbia should do the same. The Product Space analysis offers a data-driven way to evaluate the feasibility and desirability of sectoral transformation options. On the basis of detailed data on global trade and GDP per capita by country and time period, it generates insights about links between sectors and sector priorities for production and exports.

27. **The PS analysis recognizes that as economies mature, they experience a process of structural transformation that typically goes from agriculture to manufacturing and services.** During this process, economies acquire the capacity to utilize new inputs of production to deliver and create more sophisticated products and services. Every new product or input adds complexity to the pre-existing network of economic activities.

28. **Complexity of interlinkages among various products that are exported can be presented by a map showing a network of products in the product space (PS).** While some inputs are used for the production of a large number of products, others are specific to particular production processes. Recognizing that similar products require closely related inputs, Hausmann, et. al. (2006) proposed to use the relatedness in the inputs of production to present the proximity among exporting products (based on cross-country evidence). This was the foundation for constructing a map (network) that represents the global PS. Such a map also serves to demonstrate that as economies advance they move towards areas where proximity among products is greater – i.e., they move to the densest part, the core, of the PS.

29. **The PS analysis generates empirical measures that provide clues to what a country’s export strategy might be.** These measures are constructed using cross-country similarities in revealed comparative advantage (RCA) of goods that are traded and the income (value-added) levels associated with exporters of specific products. The PS analysis recognizes that a country wants to follow a diversification strategy that, while based on its current comparative advantage, leads it into new product categories where the scope for diversification is greater and which hence can lead to higher incomes.

30. **The PS methodology can be applied in steps.** Accordingly, this report relied on a stepwise approach using country-specific data for the period 1995-2010 to generate recommendations on possible options for export diversification and expansion. First, on the basis of the RCA time series data, products in the country’s existing export basket are divided into four groups according to long-term shifts in RCA: classics, emerging champions, marginal, and disappearing (see definition in Table 2.1). Then the PS metrics (characteristics of density, path and PRODY) are used to identify the best prospects for export diversification. Products that, in addition to an RCA greater than 1, have a higher “density” (more probability of acquiring an RCA>1 in a related product); larger values of the “path” (products with larger values are closer to the PS core); and a higher “PRODY” (a measure, proxied by GDP per capita of countries that already export this product, that suggests that a country
A country could look into as a source of increased export revenues.

31. **Cross-country evidence suggests that there is a trade-off between products that are within reach (higher density) and those that are more profitable.** Policy makers and analysts are thus forced to choose, because generally there is a negative relationship between the concepts of density and PRODY, and between the density and the path, and an overall positive relationship between the PRODY and the path. In other words, products that are potentially more profitable are harder to move into (lower density), while nearby (easy to move into) products have a limited scope for diversification and growth.

32. **The four groups of products: classics, emerging champions, marginal, and disappearing, are presented on a world PS map** (Figure 2.5), where Serbia’s 237 export products (colored symbols) are mapped against a background (grey symbols) of all goods traded in the world (over 700 product categories). Grey dots that are close together and toward the center of the picture tend to represent more complex, interrelated goods (such as machinery, pharmaceuticals, and electronics) that are harder to produce but more profitable. When the dots are away from the center, the products are less sophisticated, such as raw materials. Clearly, Serbia has some way to go to produce a high-value-added export basket that would contain product categories close to the core of the PS. A PS map for all the goods traded in the world identifies the various groups in some detail (see also Annex 2 of the PS chapter in Volume 2).

![Figure 2.5: Serbia’s Position in the Product Space](image)
33. Serbia’s export structure, using the four-way classification scheme of products (classics, emerging champions, disappearing and marginals) is presented in Table 2.1. Combined, the four groups of products in the PS analysis include 237 products and account for about 80 percent of Serbia’s total exports. Classics and emerging champions account for nearly 70 percent. The column Path in Table 2.1 indicates that on average, classical exports offer slightly less possibility of further diversification than emerging champions or marginals. The differences are larger when their income potential (PRODY) is compared; for classics it is much lower than for emerging champions and marginal products. In terms of ease of diversification, emerging champions, as expected, have higher densities than marginals. Yet the fact that emerging champions comprise about a half of Serbia’s export basket suggests that Serbia is producing increasingly sophisticated products. Not surprisingly, disappearing products have very low densities and are far from the PS core (low path value).

<table>
<thead>
<tr>
<th>Product Classification</th>
<th>Number of Products</th>
<th>Exports (percent of total)</th>
<th>Average PRODY</th>
<th>Average Path</th>
<th>Average Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>34</td>
<td>17.6</td>
<td>10,405</td>
<td>138</td>
<td>0.40</td>
</tr>
<tr>
<td>Emerging</td>
<td>102</td>
<td>51.6</td>
<td>13,291</td>
<td>144</td>
<td>0.39</td>
</tr>
<tr>
<td>Marginal</td>
<td>81</td>
<td>7.9</td>
<td>19,277</td>
<td>144</td>
<td>0.34</td>
</tr>
<tr>
<td>Disappearing</td>
<td>20</td>
<td>3.9</td>
<td>13,476</td>
<td>127</td>
<td>0.33</td>
</tr>
<tr>
<td>Excluded</td>
<td>71</td>
<td>19.0</td>
<td>16,328</td>
<td>130</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Notes: Classics are products with RCA>1 in both periods 1995–99 and 2005–09. Emerging champions are products with RCA>1 from 2005-09, but not earlier. Disappearing products had RCA>1 during the period 1995–99, but RCA<1 by 2005-09. Marginals did not have RCA >=1 in either period, but have relatively high PRODY and density. Excluded products had an RCA < 1 in both periods as well as either low PRODY or low density.
Source: World Bank staff calculations.

34. The PS analysis can help to formulate the short, medium, and long-term strategies for export diversification. The basis for a short-term strategy is to support traditional exports with strong linkages to more sophisticated activities. Serbia’s main classical exports are vegetables, fruits, cereals and sugar in the food and agro-processing industry; traditional iron and metal manufactures, and apparel and clothing. The aim of the medium-term strategy should be to scale-up those existing income-enhancing options, i.e. emerging export products. This group is comprised of sectors with a large number of emerging champions such as non-traditional exports of iron and metal manufactures, including non-ferrous metals, auto-related products such as pneumatics (rubber products), artificial resins (paper) and plastic materials. A longer-term strategy should remove the binding constraints for those sectors with a large number of marginals, with strong linkages to classics and emerging champions, and with high income-enhancing potential, such as the auto-related sector (see Table 2.2).

35. A more detailed analysis was conducted for food-processing, metals, and automobiles (see Volume 2). The first two were chosen because a significant portion of Serbia’s current export basket is in those areas. The third was selected because of the large ongoing investment by FIAT in the Serbian auto industry. This analysis indicates that Serbia is in a good position in food-processing; its exports of such goods have grown at least as much as those of Bulgaria, Croatia, Romania, and...
Slovakia, though not as much as those of Hungary or the Czech Republic. In metal manufacturing Serbia’s position indicates that it has space to scale up, although the total value is twice as high as that of food-based exports. However, by increasing the share of emerging exports and building on marginal products, Serbia should be able to increase the overall sophistication of its export basket. This should create production linkages to more complex activities, such as those in the auto industry.

Table 2.2: Product Space Metrics for Selected Serbian Exporting Industries

<table>
<thead>
<tr>
<th>SITC Category (2-digit)</th>
<th>Classics</th>
<th>Emerging</th>
<th>Marginals</th>
<th>Exports (%)</th>
<th>Average PRODY</th>
<th>Average Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Manufactures</td>
<td>5</td>
<td>13</td>
<td>12</td>
<td>23.5</td>
<td>16,965</td>
<td>0.351</td>
</tr>
<tr>
<td>Auto-related products*</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>3.9</td>
<td>19,659</td>
<td>0.344</td>
</tr>
<tr>
<td>Food and Agro-Processing</td>
<td>9</td>
<td>12</td>
<td>8</td>
<td>11.3</td>
<td>13,539</td>
<td>0.389</td>
</tr>
<tr>
<td>Organic chemicals</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.4</td>
<td>19,893</td>
<td>0.353</td>
</tr>
<tr>
<td>Artificial resins and plastic materials, and cellulose esters etc</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2.8</td>
<td>18,201</td>
<td>0.344</td>
</tr>
<tr>
<td>Power generating machinery and equipment</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1.8</td>
<td>18,916</td>
<td>0.339</td>
</tr>
<tr>
<td>Electric machinery, apparatus and appliances</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2.3</td>
<td>14,395</td>
<td>0.381</td>
</tr>
<tr>
<td>Furniture and parts thereof</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1.8</td>
<td>14,855</td>
<td>0.409</td>
</tr>
<tr>
<td>Articles of apparel and clothing accessories</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>3.5</td>
<td>8,799</td>
<td>0.410</td>
</tr>
<tr>
<td>Footwear</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
<td>10,165</td>
<td>0.401</td>
</tr>
</tbody>
</table>

Source: Authors' calculations
Note: Auto-related product category was generated using PS metrics. See Volume 2 for details

36. **Success with the export diversification and expansion strategy significantly depends on government’s ability to help to resolve some of the remaining sector specific obstacles.** In order to understand what are the main sector specific obstacles for increased competitiveness of the most promising export sectors in Serbia the report relied on a value chain analysis (VCA). VCA done for the purpose of this report covered metals industry (a sector which has the highest share in total export and highest number of promising export goods) as well as automotive industry (a sector which is expected to provide significant export revenues in the near future). Some of the key findings include that in each of the two analyzed sectors there is a dominant producer with only limited linkages with other participants from the sector. Reasons for limited integration of domestic producers are numerous but to large extent stem from the fact that various domestic companies to not meet international standards in their production processes.
Chapter 4:  
Industry

Introduction

37. This chapter reviews government policies to promote competitiveness and exports and highlights how competitive Serbia’s industry is compared to other countries in the region. The chapter also takes another look at the metals and auto industry, but from the “bottom-up” perspective using a value-chain analysis. Complementing the previous analysis from the “top-down” – PS angle, the conclusion is that there remains a comparative productivity and competitiveness problem in Serbia’s manufacturing. Yet there is also considerable potential for synergies, not only to generate export growth and penetrate EU markets but also to expand domestic value chains. The last would encourage growth of SMEs.

38. One of Serbia’s biggest problems is its low level of exports. While its position as a potential candidate for EU accession has increased its market opportunities, the enterprise sector must first deal with several challenges. As outlined in Chapter 3, it is encouraging that emerging champions compose half of the export basket because that suggests increasing market sophistication. However, Serbia must do even better if it is to catch up with regional competitors like Hungary, Slovakia, and Czech Republic.

39. For the past decade, the Serbian government has been using comprehensive privatization as a cornerstone of its industrial policy. Between 2002 and 2010 most SOEs went through the privatization process, which attracted significant brownfield FDI. Over 2,400 SOEs were put up for sale through public tenders and auctions and another 700 were privatized through the capital markets.

40. A striking feature of Serbia’s enterprise structure is the “missing middle” – the lack of dynamic middle-sized companies that could make a significant economic contribution. Resources are heavily concentrated in a relatively small number of large companies* that have less than average productivity. There are also numerous small and micro companies that have not been able to grow to medium size and achieve the economies of scale necessary to become competitive exporters.

41. To become more competitive internationally, the government recently launched its Strategy and Policy for Development of Industry to define priorities for the next decade. This Strategy is directed to export growth, increased investment, and job creation. Industries targeted for growth in exports are food, transportation equipment, information and communications technology, metals, and pharmaceuticals.

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* Companies are categorized based on number of employees. Micro companies have up to 10, small companies 10 to 50, medium companies 50 to 250, and large companies more than 250.
The Enterprise Sector\textsuperscript{9} in Serbia

42. **Serbian companies are less productive and their unit labor costs are higher than those of other firms in the region.** Workers in Serbia produce less than half of what workers in Slovakia produce and just over half of the output of workers in Czech Republic and Hungary. However, their wages are not sufficiently low to compensate for this. As a result, unit labor costs in Serbia are significantly higher than in the other countries (Table 2.3)

<table>
<thead>
<tr>
<th>Country</th>
<th>Worker Productivity* (EUR)</th>
<th>Unit Labor Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>23,548</td>
<td>0.37</td>
</tr>
<tr>
<td>Hungary</td>
<td>20,812</td>
<td>0.42</td>
</tr>
<tr>
<td>Poland</td>
<td>18,527</td>
<td>0.36</td>
</tr>
<tr>
<td>Romania</td>
<td>12,544</td>
<td>0.38</td>
</tr>
<tr>
<td>Slovakia</td>
<td>25,043</td>
<td>0.32</td>
</tr>
<tr>
<td>Serbia</td>
<td>12,837</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Source: Eurostat, Serbian Agency for Business Registries * Value added per worker.

43. **Although the number of micro and small enterprises vastly outnumbers the number of large enterprises, the latter dominate in terms of revenues, value added, and employment** (Table 2.4). Yet both have higher labor productivity and lower unit labor costs than medium-size companies. There seems to be a problem in the middle. This “missing middle” suggests that there are growth ceilings for small enterprises—probably related to weaknesses in Serbia’s business environment (see Chapter 6).

<table>
<thead>
<tr>
<th>Company Size by Number of Employees</th>
<th>Number of Companies 2009</th>
<th>Employment (percent) 2009</th>
<th>Revenues (percent) 2009</th>
<th>Value Added (percent) 2009</th>
<th>Labor Productivity 2007–09#</th>
<th>Unit Labor Costs 2007–09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro (0– 9)</td>
<td>82,435</td>
<td>19.7</td>
<td>16.3</td>
<td>13</td>
<td>797</td>
<td>0.37</td>
</tr>
<tr>
<td>Small (10–49)</td>
<td>9,148</td>
<td>17.6</td>
<td>21.7</td>
<td>19.2</td>
<td>1,216</td>
<td>0.42</td>
</tr>
<tr>
<td>Medium (50–249)</td>
<td>2,457</td>
<td>22.5</td>
<td>22.3</td>
<td>19.7</td>
<td>947</td>
<td>0.65</td>
</tr>
<tr>
<td>Large (&gt;250)</td>
<td>533</td>
<td>40.2</td>
<td>39.7</td>
<td>48.1</td>
<td>1,260</td>
<td>0.59</td>
</tr>
<tr>
<td>TOTAL</td>
<td>94,573</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>1,093</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Source: Agency for Business Registries, Statistical Office, WB staff calculations
\# Value added/worker in ’000 dinars

**Competitiveness in the Metals and Automotive Industries**

**Metals**

44. **The metals industry is dominated by the production of a single company, US Steel.** The industry is a prime example of the missing middle phenomenon: the 10 largest companies account for over 77 percent of all sector revenue.

\textsuperscript{9}In this text enterprise sector refers to all companies that report to the Agency for Business Registries.
45. **Serbia exports virtually all of its steel and in 2010 accounted for 0.09 percent of global crude steel production.** In 2010 steel was Serbia’s top export product. Valued at slightly over $1.3 billion, it represented over 13 percent of total exports. However, Serbia’s steel exports are highly sensitive to global output trends because they consist mostly of low value-added products with little avenue for differentiation. The Serbian steel industry manufactures mainly primary and intermediate steel products, among them both of the major primary products, flat steel and long steel, made from iron ore. Steel can also be produced from recycled scrap metal. Several small foundries in Serbia have smelters supplied by scrap sourced both domestically and abroad (see Figure 2.6 for the steel value chain).

![Figure 2.6: Steel Value Chain](image)

46. **Serbia’s steel exports are low-value-added.** Figure 2.7 shows how value is added at each stage of metal production up to manufactured products. Serbia produces mainly hot and cold rolled coils, though some pipes are exported. It does not export structured steel and yellow metals where the bulk of the value is added. Since Serbia has no iron ore, raw materials tend to be imported, processed, and then exported still in a relatively simple form.
47. Some SMEs manufacture small quantities of high-value-added steel products. A few firms produce intermediate steel products that are inputs to white goods and appliances. Several others manufacture finished steel goods: rods, angles, plates, cast items, tubes, pipes and hollow profiles, household articles, and radiators.

48. A revenue/cost analysis of the steel industry indicates that:

- Core profitability has been marginal or negative for most of the Serbian steel industry for the past three years.
- Energy costs have a moderate impact on the competitiveness of most steel companies but a much more significant impact on U.S. Steel Serbia.
- Changes in raw materials prices are determined by global supply conditions and passed through to buyers.
- Personnel costs are a small fraction of total production costs.

The Automotive Industry

49. Serbia’s automotive manufacturing history dates back over 80 years. Zastava, producing a version of a FIAT car, was the biggest automobile manufacturer in Yugoslavia. It had to significantly reduce production because of the conflict and accompanying sanctions. While production has since resumed, technology in most of the plants has not advanced significantly. To reactivate the Zastava plant and reenergize the industry, the government has attracted FIAT, which will invest in a major original equipment manufacturer (OEM) production facility. It will also retrain the workers. Similar efforts by the Slovakian government to attract automotive FDI yielded significant rewards for its economy (see the Industry chapter in Volume 2).

50. FIAT has the potential to transform Serbia’s automotive industry, and others. The company is bringing in its own group of Tier 1 suppliers, which represent a huge opportunity for building backward links to domestic suppliers (Tiers 2 and 3). To harness these opportunities, there is a need to actively develop the automobile cluster. Getting FIAT to invest in Serbia is a major accomplishment and some Tier 1 suppliers may enter into Serbia trusting that the rest of the supply chain will fall into place through regular market forces. But FIAT can also source its supplies on a purely commercial basis from abroad, without any local supply chain requirement. Creating these backward linkages requires concerted effort.
51. **The main messages from a revenue/cost analysis of the automotive sector are that:**

- The industry is concentrated because of the sheer size of FIAT, which already accounts for 52 percent of total sector earnings.
- Core profitability in the automotive industry is slightly positive at 103 percent in 2009 and 101 percent in 2010.
- Energy prices have only a moderate impact on competitiveness. Energy and fuel costs accounted for 3 percent of total production costs in the automotive industry in 2010.
- Raw materials are the major cost driver, accounting for 66 percent of total production costs for the nine large firms in the industry.
- Wages take up a significant share of costs, especially for SMEs.

52. **The metals and the automotive industries are important to the economy of Serbia in different ways.** Figure 2.8 shows where U.S. Steel and FIAT are positioned in their value chains: U.S. Steel, Serbia’s dominant steel producer, is near the bottom of the global and national value chain. It uses raw materials to produce semi-finished and finished goods which are used for further manufacturing. FIAT is at the top of the value chain. It produces high-value-added finished goods for export around the globe. Their positions lead to very different implications for policies that would best support development of the two industries.

Figure 2.8: Value Chain Positions of U.S. Steel and FIAT
53. **U.S. Steel offers potential for forward linkages in the economy, particularly to SMEs producing higher-value-added steel products.** Policy interventions in the metals industry should therefore be focused primarily on providing incentives and removing obstacles that might hinder US Steel from upgrading its products or selling inputs to domestic producers of higher-value-added metal products.

54. **On the other hand FIAT offers potential for backward linkages with local automotive suppliers.** According to the OECD, backward linkages account for twice the value-added in the automotive industry (OECD 2009). Therefore an option for policy interventions in the automotive industry could be to support capacity building by providing adequate education and active labor market programs in order to help to get domestic automotive suppliers to the level required first by Tier 1 and 2 suppliers with the eventual goal of supplying OEMs like FIAT.

**Synergies Between the Metals and Automotive Industries**

55. **Because automotive components are in many ways an extension of the metals chain, there is great potential for backward linkages.** Steel comprises 55 percent of the value of an average automobile. The primary areas for synergies in the automotive value chain would be linking Tier 3 suppliers that produce basic materials such as flat rolled sheets to Tier 2 suppliers that produce individual parts. This was also shown by the PS analysis, with the greater number of emerging champions and marginals concentrated in the metal manufacturing and auto-related production (see Table 2.2).

56. **However, promoting synergy between the automotive and steel industries is not just a matter of having a base metals industry in the country.** The type of steel the automotive industry needs is very specific. Most of the steel currently produced in Serbia is not processed to automotive industry requirements. Local industry experts estimate that the automotive industry should be able to source about 15 percent of its supplies within Serbia based on products currently being produced.

57. **The steel industry will need to continually upgrade if it is to meet the increasingly stringent requirements of the automotive industry.** New lightweight advanced high-strength steels have the potential to reduce automobile energy consumption by 50 percent over the life cycle. In the automotive industry, 60 percent of the steel grades used today were invented in the last five years. New steels make possible thinner components that reduce weight but also increase safety for drivers and passengers.

58. **Serbia cannot remain competitive in either industry in the long term unless it develops competitive advantages anchored in quality and improved technology.** Serbia’s cost competitiveness cannot match those of Asian competitors because of its limited production scale. Thus, the necessity for innovation cannot be overstated. With an established metals and automotive industry and a high quality educational system (including TVET and good adult education), the country could have a unique opportunity to leverage that base to produce next-generation products.
Policy Recommendations

Orient public policies toward developing coherent inter-connected clusters to maximize economic spillovers.

- *In the metals industry*, encourage forward linkages by removing any disincentives to trade between different domestic manufacturers.
- *In the automotive industry*, promote backward linkages. Consider a government automotive industry action plan to bring domestic Tier 2 suppliers of aftermarket products into the automotive value chain.

Target high value-added FDI.

- *In the metals industry*, attract companies that require inputs produced by U.S. Steel for a quick win.
- *In the automotive industry*, court other OEMs to help upgrade local capabilities and prevent competition problems arising from having FIAT as the only local buyer.

Promote public-private partnerships, cooperation and investments in Research and Development.
Chapter 5:
Agriculture

Introduction

59. There is general agreement that the potential of agriculture for improvement is massive. In the not-so-distant past, Serbia was a major exporter of agricultural goods. In recent years, Serbia has become a net food exporter again, but its exports could be much higher. The extension service could be made more effective by finding ways to change the behaviors of hundreds of thousands of farmers. Supply chains could be improved through government assistance in setting up wholesale markets, cold-store facilities, packing plants and milk laboratories. Trade could be liberalized further and the costs of trade (customs, logistics and transport) further reduced. Budget could be reallocated away from area payments to initiatives such as those mentioned above, where they could lead to higher overall returns to farmers. Not least, unpredictable policies and a lack of attention to structural reforms are making it hard for farmers, processors, and traders to plan ahead. Yet there are major opportunities they could seize both within and beyond the EU.

The Gap Between Potential and Performance

60. The importance of agriculture to Serbia’s economy is widely recognized. In almost all local, regional, and national strategies, agriculture has been flagged as an area for development. Agriculture has not only great economic and social importance but also high political significance because so many Serbian citizens live in rural areas. Thus, because often agricultural policies appear to be driven more by political than by economic concerns, they are often inefficient in terms of reaching Serbia’s development goals.

61. The potential for improvement is massive. According to studies, milk yields could be doubled, cereal yields increased by 50 percent, and gross margins doubled. Serbia’s export value per hectare (ha) of farmland is lower than that of almost every other country in Europe. By increasing yields, controlling costs, switching to higher-value products, and adding value through processing and marketing, Serbia’s food sector can dramatically increase its output value, export value, and profit. The potential benefits from achievable improvements are probably greater than the total support the sector will receive from the CAP.

62. The restructuring of the sector, liberalization of trade, and particularly the access to EU markets, have allowed Serbia to become a net food exporter starting in 2005, when the sector had a surplus of about US$ 255 million. By 2010 agro-food exports amounted to over US$1 billion. However, Serbia is still far from exploiting the full potential created by its natural conditions, location, and trade access.

63. Growth is held back by unpredictable policies that make it impossible for farmers, processors, and traders to plan ahead. Participants in the agriculture market chain are not getting a clear message from the policy makers. Policies are often characterized by short-term ad hoc measures so that market participants find it
impossible to plan ahead. Each short-term action may solve an immediate problem but also create long-term problems and confusion in the market. Instead of building market awareness, circulating market information, protecting competition, enforcing contracts, and upholding the rule of law, the state interferes in the operation of markets through, e.g., issuing pronouncements on expected prices, releasing lower-priced products from commodity reserves, or introducing export bans.

64. **Prices are more volatile in Serbia than in the EU.** Many agricultural and food products show high volatility, with Serbian prices rising higher than EU prices when there are shortages and dropping below EU prices when there are surpluses (see Volume 2 for more details). This volatility, which suggests a lack of competition and efficiency in marketing chains, makes it difficult to achieve a continuity of exports, as well as having obvious negative effects on consumers.

**Structural Challenges**

65. **Market development is changing the structure of farming; a commercial farm sector is gradually emerging.** Serbia is seeing an increasing divide between commercial farms that are taking the advantage of modern agricultural technology and markets, and many small farms that still produce in traditional ways and either market through informal channels or supply to processors from a weak bargaining position.

66. **Serbia’s food processing industry is underdeveloped and uncompetitive, which seriously impairs its ability to export to the EU.** Serbia has a very large number of primary producers and an underdeveloped food processing sector that has not yet been able to penetrate European supermarkets. If Serbia wants to increase the value of its food production and exports, it will need a better-organized marketing chain and investments in storage and food processing.

67. **Informal markets are a major force.** Products consumed on farm or marketed locally substitute for imports and make a highly significant contribution to the balance of payments, as well as contributing to household income and food security of some of the poorest members of society. One of the challenges is how to preserve the strengths of this traditional system while developing the processing and marketing chains required for long-term competitiveness within the EU.

68. **As consumer demand in Europe changes, Serbia must be prepared to meet new expectations for food safety, quality, and origin.** European consumers are increasingly concerned about food safety, ecologically conscious, and oriented toward local products, so there is more differentiation between products that sell on price and those that compete on quality. Because these trends are less advanced in Serbia, producers and processors find it hard to understand the needs of their customers abroad. Therefore, if they are to gain entry to the more lucrative EU markets, policy makers in Serbia must take a lead and offer producers the opportunity to certify their products under one of the international standards.

69. **The cereal production is more important in Serbia than elsewhere in Europe, and the livestock production is declining.** The share of cereals in total production value in Serbia, encouraged by the recent (and expensive) area payment
system, is 34 percent, versus 11 percent in the EU (Figure 2.9). Meanwhile the livestock output is declining rapidly in response to international competition.

Figure 2.9: Share of value of production of selected sectors in 2009

70. **The pre-accession period requires great adjustments and investments at all levels of agriculture and food industries.** Farmers have the biggest difficulties on the road to the EU membership but they are also the ones who will profit the most upon joining. A significant part of the costs of adapting Serbia’s agriculture to the Common Agriculture Policy of the EU are borne by all citizens, as taxpayers, while the biggest benefits will accrue primarily to farmers.

**Policy Responses**

71. **Uncertainties with agricultural policy and declining public spending have discouraged investment.** Serbia has redesigned its agricultural policy every two years since 2000, leading to an unstable policy environment. In addition, the share of public expenditure devoted to the agricultural and food sector has been halved, from 5 percent in 2004 to 2.5 percent in 2010 (3.2 percent once own revenues of the Ministry of Agriculture are included, see Table 2.5). The agriculture budget as such is no longer sufficient for government to fulfill its tasks adequately.
Table 2.5: Serbia Agricultural Budget, 2004-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Total budget of the central government RSD mln</th>
<th>Agricultural budget RSD mln</th>
<th>Percentage of total %</th>
<th>Own revenues RSD mln</th>
<th>Own revenues as % of total</th>
<th>Total budget available RSD mln</th>
<th>Percentage of total budget %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>362,045</td>
<td>18,060</td>
<td>5.0%</td>
<td>2,085</td>
<td>0.6%</td>
<td>20,145</td>
<td>5.6%</td>
</tr>
<tr>
<td>2005</td>
<td>400,768</td>
<td>16,270</td>
<td>4.1%</td>
<td>2,714</td>
<td>0.7%</td>
<td>18,984</td>
<td>4.7%</td>
</tr>
<tr>
<td>2006</td>
<td>505,821</td>
<td>23,593</td>
<td>4.7%</td>
<td>3,950</td>
<td>0.8%</td>
<td>27,544</td>
<td>5.4%</td>
</tr>
<tr>
<td>2007</td>
<td>595,518</td>
<td>21,410</td>
<td>3.6%</td>
<td>4,686</td>
<td>0.8%</td>
<td>26,096</td>
<td>4.4%</td>
</tr>
<tr>
<td>2008</td>
<td>695,959</td>
<td>27,634</td>
<td>4.0%</td>
<td>5,261</td>
<td>0.8%</td>
<td>32,895</td>
<td>4.7%</td>
</tr>
<tr>
<td>2009</td>
<td>719,854</td>
<td>15,964</td>
<td>2.2%</td>
<td>10,726</td>
<td>1.5%</td>
<td>26,690</td>
<td>3.7%</td>
</tr>
<tr>
<td>2010</td>
<td>797,498</td>
<td>19,908</td>
<td>2.5%</td>
<td>5,714</td>
<td>0.7%</td>
<td>25,622</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance of the Republic of Serbia

72. Current government agricultural support programs do little to achieve Serbia’s strategic objectives for the sector, extension services are wholly inadequate and supply chains undeveloped. Over 80 percent of total expenditure is on area payments, which are focused on specific groups of farmers based on the size (mainly small-scale farmers), production (especially crop production), and region (Vojvodina) where the majority of arable land and such production are concentrated. This support increases income disparities between farms and regions. It distorts the production pattern by giving little encouragement to the high-potential fruit and livestock sectors. Extension services are poor and inadequate storage and processing facilities make for weak supply chains, which hold back agricultural supply response.

73. High tariff protection encourages Serbian farmers to produce import substitutes rather than exportable goods. The bilateral and multilateral trade agreements signed in recent years have helped to reduce these negative effects, but they are still significant. Further, export subsidies provide a financial benefit only to a few exporting companies, not the sector as a whole.

74. Efforts of the Directorate of Commodity Reserves (DCR) to stabilize market prices are no longer realistic or appropriate. The DCR pursues two rather different objectives: maintain strategic stocks in case of war, natural disaster, or other disruption to supply; and stabilize domestic prices by intervening in commodity markets. This was a useful role during the era of conflict and sanctions, when it built up stocks in periods of high supply and low prices and released them to the market when supply was short and prices high. More than a decade later, the DCR continues to play that role, despite the major changes in Serbia’s political and trading relationship with the rest of the world. The goal of stabilizing domestic prices is practically not achievable in an open economy, since whenever an intervention body starts buying to raise prices, imports increase and push prices down again; and when it starts to release stocks to bring prices down, exports increase and prices go up again.

75. Keeping stocks for food security reasons also has to be reconsidered. Domestic food security based on food reserves was a reasonable strategy in times of socialism and when the country was less integrated in the world economy. At present, when Serbia has many trade agreements and is well on the way to becoming an EU
member, the risk that it will suddenly find itself unable to import vital food stocks is considerably lower. On the other hand, there may be new risk factors, such as extreme weather events or terrorist actions, that should be taken into account when determining the level, nature, and location of emergency stocks.

**Policy Recommendations**

Government would be well-advised to intervene only in areas where there are significant market failures and the probability of government failure low. Market failures will be easier to identify if government policy is based on evidence and analysis of underlying problems. Careful analysis should also help reduce the frequency of policy changes and thus reduce the uncertainty faced by farmers.

Recommendations to enhance agricultural productivity are the following:

1. **Make the policy process more predictable, particularly by clearly defining the role of government.** This will reduce uncertainty, increase investment, and thus speed up sector restructuring.

2. **Build an effective extension service.** Fulfilling Serbia’s large agricultural potential will require changes in the behavior of hundreds of thousands of farmers. Extension is vital for promoting such change. The government should act decisively to ensure that the extension service adheres strictly to its core mission of helping farmers to become more competitive and that it is not sidetracked into administering agricultural subsidies and grant schemes.

3. **Improve the supply chains.** Supply chains are an area where market failure is common and effects of investments in linkage phases (storage, packaging, processing, and transport) are strong. Such investments can stimulate exports and transmit benefits all the way down the supply chain to the small-scale farmer. Because massive investment is needed to bring supply chains up to international standards, government needs to create adequate environment to allow for such investments, provide support when absolutely necessary and explore the options to utilize EU-funded IPARD resources.

4. **Continue with trade liberalization.** Serbia should resist the temptation to apply ad hoc trade bans, licensing systems, or non-tariff barriers as quick fixes of short-term problems. Serbia may want to abolish export subsidies as soon as possible; the practice is both disruptive and costly.

5. **Replace the DCR with EU-compatible mechanisms.** The Directorate should be released from its role of market stabilization, and instead be asked to prepare for the implementation of the CAP’s “Common Market Organisation”. The Government would be well-advised to reduce price volatility through enhanced trade, Serbia’s integration with regional markets, and through the development of commercial risk-management systems, such as forward and futures trading. Maintaining strategic reserves against political or natural disasters should be separated from regulating markets.
6. **Revise the agricultural budget and its allocation.** At less than 1 percent of GDP, the present agricultural budget is not only small by international standards, but its share in Serbia’s budget has also declined. In the next few years Ministry of Agriculture must prepare the agricultural and food sector for EU integration and WTO accession. It will almost certainly require a larger budget if it is to fulfill Serbia’s expectations for the sector. But even more urgent and more important than increasing the budget is reallocating existing resources. Reallocating of funds from costly and ineffective area payments and milk subsidies is the most immediate way to finance essential investments in institution building and providing essential public goods, such as making the extension service more effective and building the supply chains.