Investment Matters
The Role and Patterns of Investment in Southeast Europe

Borko Handjiski
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Acronyms and Abbreviations

EBRD  European Bank for Reconstruction and Development
BiH  Bosnia and Herzegovina
ECA  Europe and Central Asia
EU-8  The countries that acceded to the EU in 2004 (excluding Cyprus and Malta)
FDI  Foreign Direct Investment
FIAS  Foreign Investment Advisory Service
GFCF  Gross Fixed Capital Formation
ICT  Information and Communication Technology
IMF  International Monetary Fund
M&E  Machinery and Equipment
NMS  New Member States
OECD  Organisation for Economic Co-operation and Development
PPPs  Public Private Partnerships
R&D  Research and Development
SEE  Southeast Europe
TFP  Total Factor Productivity
TIRS  Transport Infrastructure Regional Study
The economies of Southeast Europe (SEE) have witnessed significant economic improvement since the conflict period of the 1990s. Growth was particularly strong in the past six years, but lower compared to other fast growing countries such as East Asia and the Baltics or some other New Member States. While part of the difference with East Asia can be attributed to the faster population growth in the East Asia countries, population changes in SEE and in the New Member States have been similar.

Investment is a key driver of improved economic performance. The importance of investment for achieving sustainable economic growth has been empirically proven in fast-growing economies: investment contributes directly to total output, and also drives productivity improvements.

The purpose of this note is to provide policy insights to decisionmakers, academics, and researchers on the trends in investment in SEE. A comprehensive assessment of what determines investment is essential to identify, to the extent needed, policy actions that stimulate it. The report looks more in-depth into private investment trends in SEE, and explores some determinants of private investment, such as: the financing sources for investment, the contribution of FDI and the role of public investment. The selection has been made based on the relative importance and data availability for the SEE economies. Some key determinants of investment such as political stability and business environment have not been included because these are already well covered in the existing literature. Overall, the report aims to assess not only the quantity but also the quality of investment.

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1. In this report, SEE refers to Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia (FYR Macedonia), Montenegro, Serbia and Kosovo (under UN Security Council Resolution 1244).
It should be noted that while (investment in) human capital is equally, if not more, important for economic growth, its role and patterns in SEE are beyond the scope of this report.

This paper shows that investment rates in SEE are substantially lower than among the EU-8 and the fast growing East Asian economies, which could explain partly the slower economic growth in SEE. Investment levels have only started to increase in recent years in most SEE countries. Private investment, which usually drives productivity gains and should have a leading role, has been particularly low. Hence, achieving higher investment rates, and a better quality of investment, is an overarching objective and this poses an important challenge for policy makers in SEE.

Chapter 2 describes the contribution of investment to growth; Chapter 3 provides stylized facts and analysis on private investment in the region; Chapter 4 provides insights on the financing of investment; Chapter 5 describes foreign investment trends in the region; Chapter 6 looks at public investment in SEE and its impact on private investment; and Chapter 7 summarizes the findings.
CHAPTER 2

Investment, Productivity, and Economic Growth in SEE

The Contribution of Investment and Productivity Improvements to Output Growth

The countries of Southeast Europe (SEE) have witnessed significant growth since the mid-1990s. Growth was particularly strong in the past six years, as the region recovered from conflicts and political turmoil, though lower compared to other fast growing countries such as East Asia and the Baltics or some other new Member States. The difference with East Asia can be partly attributed to the faster population growth in the East Asia countries, while population changes in SEE and in the New Member States have been similar. With the exception of the FYR of Macedonia, all other SEE countries witnessed annual growth rates over the last decade in excess of 5 percent, and even the FYR of Macedonia has seen acceleration in its growth rates since 2003.

Output growth in SEE in the 1990s was mostly driven by a rise in TFP (World Bank 2008b). TFP growth has followed a similar trend as in other transition countries during the first 15 years of transition. The first years of transition were accompanied by political and economic instability and uncertainty, and output fell in all transition economies. The fall in output was even larger in SEE, compared to Central Europe, partly because of the armed conflict in some parts of the region. All SEE countries had a negative TFP growth in the early 1990s, and, since 1995, TFP growth in the region has been positive, though declining. Unlike in other transition countries, including the EU-10 countries, TFP growth in SEE declined from over 4 percent in 1995–98, to some 2 percent in the 1999–2005 period.

These broad developments are to be attributed to the transition process. Most of the increases in TFP in SEE since the mid-1990s could be attributed to post-transition
Box 1: Macroeconomic Framework

The theoretical framework that follows is based on Solow’s model which explains growth through increases in capital investment, labor (quantity and quality), and improvements in total factor productivity (TFP). TFP refers to increases in productive capacity not attributable to increases in labor and capital inputs and captures efficiency gains from technological progress within firms, including: better production management methods, better customer support, and better distribution channels to deliver goods and services.

The use of this methodology is accompanied by few caveats. To start with, the factors that influence TFP growth are not fully understood in the literature. In fact, in the production function approach, TFP growth is calculated as a residual. There are also problems of measurement of K and L, which can also result in an attribution of GDP growth to the (TFP) residual (for example, if improvements in the quality of K and L are not fully captured). Some problems, such as relative prices, are common for most countries of the world (for example, how to deal with the tremendous fall of the price of computing power). Others, such as large changes in capacity utilization over a relatively short period, are more specific to transition countries, including the SEE countries. According to the “Unleashing Prosperity” regional study (World Bank 2008b), the contribution of capital in Russia’s output growth during 1999–05 increases from just over zero to 2 percent when capacity-utilization is included in the analysis.

Reallocation of resources (privatization of state property and re-starting of idle capacities), though structural reforms in this period also contributed to the productivity increase. Changes in factor utilization have also affected the movements in TFP. Capacity utilization fell in the early years of transition, which has been ascribed to the negative change of TFP. Later on this trend was reversed as plants and machinery were put back in use. Unfortunately, the impact of the changes in factor utilization on TFP growth cannot be precisely observed because of lack of data.

It seems that much of the easier part of transition-driven TFP growth has already been achieved in most of the SEE economies. The contribution of TFP declined from more than 4 percent to less than 2 percent between 1990 and 2005.
4 percent during 1995–98 to about 2 percent during 1999–2005. While SEE countries differ in their transition process, the slowdown in TFP growth could be explained by the leading contribution of simple reallocation of resources (through privatization) in the early years of the transition (Kathuria 2008). The transfer of public to private ownership is still ongoing in BiH and Serbia (share of private sector in GDP was just over 50 percent in 20062), and there is still room for further privatization-led TFP growth in these two economies, while in the other SEE economies the privatization process is fairly advanced. As this source of TFP growth will dry out over time, elevated and sustained TFP growth would need to come from further reallocation of resources and firm turnover, as well as from within-sector productivity improvements. The “Unleashing Prosperity” regional study confirms the dominant role of within-sector productivity growth in the EU-10 over 1999–2004.

Continued robust output rise would require new sources of TFP growth and increased contribution of capital and labor. Whereas in the long run, sustainable growth is to be led by TFP, capital and labor could also be significant generators of growth. There is still strong potential for reallocation based (between-sector) TFP growth in SEE, but it varies among the economies and it might soon be exhausted in the more advanced ones. Hence, achieving robust and sustained growth would require a combination of increases in capital and labor as well as continuous improvement in TFP.

The hypothesis is that private investment needs to increase, especially if bearing in mind that productivity gains (TFP growth) often come from investment in new technologies (and human capital). Investment would also be needed to mobilize the abundant labor supply in most of the SEE economies. Labor participation is fairly low and unemployment rates in SEE are in double-digit figures in most of the economies. Notwithstanding the importance of other factors, such as the skills of the labor force and overall productivity, increased investment could contribute to employment creation, speed up growth, and help resolve some of the social problems with which the region is confronted.

This note will only look at the role of physical capital formation as a contributor to output and stimulant to productivity increase, not withstanding the fact that human capital formation is at least equally, if not more, important for the region.3

**Investment as Driver of Productivity**

Investment underpins growth by bringing more inputs to the production process. Yet, it is not just the value of additional inputs that matters for growth—it is the productivity gains that result from firms’ investment in new technologies and more productive processes. As economies advance in the transition process, within-firm4 productivity growth becomes more important as a driver of productivity growth, while the “between” and “cross” sector...
reallocation of resources\(^5\) plays a lesser role (World Bank 2008b). Investment can be a key driver of firm productivity growth in all sectors of the economy, especially as the sectorial specialisation of the SEE economies is still dominated by low value-added activities. Whereas countries like Czech Republic, Hungary, Poland, and more recently Slovakia and Romania were able to attract investments in manufacturing activities such as car industry, information and communication technology (ICT) products, or machines and equipment, the process has been lagging in the region.

Labor productivity in agriculture in the more efficient EU-8 countries was driven by capital deepening (and labor shedding). Large-scale farms that have made substantial investments in fixed assets dominate the agriculture sector of the more productive countries, such as Hungary, Slovakia, Czech Republic, Estonia, and Lithuania. On the other hand, the SEE countries are characterized by labor-dominant agriculture sector, with small farms and little capital. Hence, the efficiency in the sector is far from desired levels compared to the more successful CEE countries.

Although there are many potential sources to improve TFP in manufacturing firms, experience in the transition countries has shown that productivity is often driven by efficiency gains in industries with higher capacity for innovation. In manufacturing, which accounts for the bulk of industrial output in SEE, a group of medium and high-technology industries achieved the highest average annual productivity growth rates. At the same time, these industries are among the biggest producers of ICT goods or use a relatively large amount of ICT capital. Hence, increased investments in ICT could promote faster growth in SEE, however, these economies need to be able to reap the benefits of ICT (for example, to develop skilled labor force).

Services have a significant potential to drive growth in Europe and Central Asia (ECA),\(^6\) including in SEE countries, and TFP growth in services is closely linked to capital deepening in this sector. Service productivity growth in transition economies has been driven by strong performance in “backbone” industries: transport, telecommunications, and financial intermediation services. Productivity growth in these sectors in ECA over 1997–2004 outperformed average productivity growth in EU-15 countries. All three sectors are capital intensive, and sustaining the growth momentum will require further investment. The investment would need to come from both the public and the private sector: whereas transport infrastructure is most often provided by the public sector, financial services and telecommunications are almost fully in private ownership in SEE.

\(^5\) The “between” effect reflects the impact of the reallocation of employment across sectors. A positive between effect means that aggregate productivity increases either because the sector has higher than average productivity and labor is moving into it or because the sector has lower than average productivity and labor is leaving it. The “cross” effect captures the impact of reallocating employment into sectors with growing productivity. A positive cross effect means that aggregate productivity increases because employment moves to sectors with positive productivity growth (or out of sectors with negative productivity growth).

\(^6\) ECA region includes the 10 New Member States (NMS), SEE, the CIS countries and Turkey.
CHAPTER 3

Private Investment is Critical for Sustained Rapid Growth

Private Capital Formation in SEE

This section analyzes some of the key determinants of private investment in SEE as well as the relationship between private investment and growth using sectorial data for these economies. As this study aims to build upon the existing literature on investment, productivity, and growth in SEE, some of the biggest factors for investment such as political stability and business environment have not been included. Nonetheless, political stability and an enabling business environment are *sine qua non* conditions for a more spectacular increase in (domestic and foreign) investment in all SEE economies.

Capital accumulation in SEE is low compared to world averages, which partly explains the gap in growth rates compared to other (fast-growing) regions in the world. Indeed, numerous empirical studies have found investment to be a lead determinant of economic growth: Bosworth and Collins (2003) and Levine and Renelt (1992) have found that of the determinants of growth, investment to GDP has the most explanatory power. This finding was also confirmed in the report of the Growth Commission (2008), which concludes that countries with high and sustainable growth invest a significant share of income (total domestic and foreign investment often exceeds 25 percent of GDP). What is more worrisome for the region is that private investment is also quite low. Private investment’s share to GDP, including change in inventory, hovered at around 17 percent of GDP until 2003, and started to pick up only in 2006.

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7. The data quality in general is relatively weak in most SEE countries, and the findings in these study should be taken with some caution with regard to the reliability and comparability of investment data.
The improved performance in 2004–07 varied among the SEE economies. As can be seen from the figure below, the increase in the share of private gross fixed capital formation to GDP ratio was strongest in the two smallest economies, Montenegro and Kosovo, and Bosnia and Herzegovina, whereas improvements in the rest of the region were moderate. In terms of level, investment exceeded 25 percent of GDP only in Montenegro, Kosovo, and Croatia in 2007.
Even though the private investment to GDP ratio in SEE is above the EU average, it is significantly below the levels achieved by the EU-10. The gap for SEE is negative even when comparing with investment levels in the EU-10 countries in earlier years of transition (since the EU-10 are more advanced in the transition process). For example, Slovakia’s and Latvia’s private investment share in GDP was around 25 percent in the 2000–03 period, one fifth higher than the ratio for the SEE countries in 2007. Furthermore, most of the fastest growing EU-10 countries, in particular Bulgaria and Latvia, but also Estonia, accomplished a notable increase in capital outlays between 2000 and 2007.

Gross fixed capital formation comes in two forms: construction or machinery and equipment (and other). Research by J. Bradford DeLong and Lawrence Summers (1991) confirmed the robust positive relationship between investment in machinery and equipment (M&E) and productivity. In all SEE countries except for Serbia, the share of construction in GFCF (see Table 1). Construction is an essential form of almost any investment activity, yet, acquiring M&E, in particular more sophisticated technologies, would signal a move towards higher productivity sectors. Between 2004 and 2005, the share of construction increased in Croatia and Serbia and remained unchanged in the FYR of Macedonia. Montenegro, on the other hand, achieved a sizable move from construction to M&E: the share of M&E rose from 33.6 to 40 percent of GFCF.

In contrast, firms in most EU-10 countries spend more on M&E than on construction. As the figure below points out, M&E in the fast growing EU-10 economies accounted for between 45 and 50 percent of GFCF prior to joining the EU; in Latvia, the share was above 50 percent until 2002. Moreover, the EU-10 economies invested even more in M&E in the

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8. The discrepancy in Serbia might be a result of the poor quality of construction statistics.
earlier years of transition, and the shift towards higher spending on construction could partly be explained by the inflow of EU pre-accession funds for (transport) infrastructure and the booming residential sectors. The gap in the GFCF structure between SEE and the EU-10 is even greater if measured in real terms. Whereas prices of investment goods are more or less homogenous in the EU-10 and the SEE count.

**Sectorial Investment Patterns**

The sectorial distribution of investment, to begin with, depends on the structure of the economy. Within the SEE region, the former Yugoslav republics have a more or less similar structure: agriculture accounts for some 10 percent of value added, the industry’s share is about one quarter, and services account for close to two thirds of value added. Albania differs in the size of its agriculture sector, which accounts for over 20 percent of value added.

**Table 1. GFCF by Technical Structure (2004–05 average)**

<table>
<thead>
<tr>
<th></th>
<th>BiH</th>
<th>Croatia</th>
<th>Macedonia, FYR</th>
<th>Montenegro</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>53.9</td>
<td>56.1</td>
<td>59.1</td>
<td>55.4</td>
<td>44.5</td>
</tr>
<tr>
<td>Equipment</td>
<td>42.8</td>
<td>36.2</td>
<td>37.4</td>
<td>37.0</td>
<td>48.1</td>
</tr>
<tr>
<td>Other</td>
<td>3.4</td>
<td>7.8</td>
<td>3.5</td>
<td>7.6</td>
<td>7.4</td>
</tr>
</tbody>
</table>

*Source: National statistical offices.*

**Figure 5. GFCF in Machinery and Equipment in Some of the EU-10**

*Source: Eurostat.*
added, while industry and services account for about one fifth and over half of valued added respectively.

A more detailed look at the sectorial structure (NACE level) of the SEE economies reveals some heterogeneity among the economies. In manufacturing, financial services and real estate, discrepancies exist among groups of countries. For example, the share of manufacturing is much greater in Croatia and the FYR of Macedonia compared to the rest of the region. In other sectors, such as construction, hotels and restaurants and transport and communications, the economy structure is similar, with one or two outliers in each sector.

The distribution of investment by sector, relative to the sector’s share in value added, varies considerably across the region. All countries have more or less similar share of investment in agriculture, fisheries and mining sectors relative to those sectors’ share in value added.

Table 2. GDP Structure (NACE) of the SEE Economies (in percent)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Albania</th>
<th>BiH</th>
<th>Croatia</th>
<th>Kosovo</th>
<th>FYR</th>
<th>Montenegro</th>
<th>Serbia</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>16.2</td>
<td>10.1</td>
<td>7.3</td>
<td>8.6</td>
<td>13.3</td>
<td>10.4</td>
<td>13.5</td>
<td>11.3</td>
</tr>
<tr>
<td>Fishing</td>
<td>0.0</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>0.8</td>
<td>2.3</td>
<td>0.8</td>
<td>0.0</td>
<td>0.6</td>
<td>1.7</td>
<td>1.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13.1</td>
<td>11.7</td>
<td>19.4</td>
<td>15.1</td>
<td>19.6</td>
<td>9.8</td>
<td>16.3</td>
<td>15.0</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
<td>5.3</td>
<td>3.2</td>
<td>0.0</td>
<td>4.0</td>
<td>5.6</td>
<td>3.3</td>
<td>3.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Construction</td>
<td>22.4</td>
<td>4.8</td>
<td>6.6</td>
<td>12.0</td>
<td>6.8</td>
<td>3.6</td>
<td>3.4</td>
<td>8.5</td>
</tr>
<tr>
<td>Wholesale and retail trade, etc.</td>
<td>15.7</td>
<td>12.5</td>
<td>10.2</td>
<td>15.9</td>
<td>12.5</td>
<td>11.1</td>
<td>11.1</td>
<td>13.0</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>3.7</td>
<td>3.6</td>
<td>3.3</td>
<td>1.7</td>
<td>3.5</td>
<td>0.9</td>
<td>0.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>9.6</td>
<td>8.8</td>
<td>10.1</td>
<td>4.8</td>
<td>10.4</td>
<td>11.3</td>
<td>10.8</td>
<td>9.4</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>4.1</td>
<td>5.9</td>
<td>4.9</td>
<td>4.3</td>
<td>2.9</td>
<td>6.8</td>
<td>6.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Real estate, business activities etc.</td>
<td>10.8</td>
<td>11.2</td>
<td>18.8</td>
<td>3.6</td>
<td>13.9</td>
<td>14.6</td>
<td>14.6</td>
<td>12.2</td>
</tr>
<tr>
<td>Public administration and defense</td>
<td>10.1</td>
<td>6.7</td>
<td>20.3</td>
<td>8.3</td>
<td>10.9</td>
<td>7.3</td>
<td>7.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Education</td>
<td>5.2</td>
<td>4.5</td>
<td>0.5</td>
<td>4.2</td>
<td>5.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.8</td>
</tr>
<tr>
<td>Health and social work</td>
<td>4.6</td>
<td>4.9</td>
<td>1.0</td>
<td>4.5</td>
<td>5.4</td>
<td>4.9</td>
<td>4.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Other community activities</td>
<td>2.9</td>
<td>3.0</td>
<td>0.7</td>
<td>2.8</td>
<td>3.5</td>
<td>2.1</td>
<td>2.1</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: National statistics offices.
added. Investment shares diverge substantially in manufacturing, construction and hotels. According to the table below, manufacturing firms in BiH and Serbia invest much more compared to firms in Croatia, the FYR of Macedonia and Montenegro. It seems electricity, gas and water supply sector in Montenegro has invested less compared to the rest of the region. On the other hand, investment in hotels and restaurants has been very high in Montenegro as a result of the booming tourism industry. Investment in construction in the FYR of Macedonia is disproportionately high, which might be partly due to data comparability issues.

### Sectorial Investment, Output, and Labor Productivity

This section compares sectorial investment and output through several indicators for which data is available. While more sophisticated econometric analysis would be needed to assess more accurately the links between the variables, the correlations, and simple regressions bring out some interesting insights.

A simple comparison between sectorial investment and output shows that more investment in a sector has not necessarily lead to higher output growth. The two figures below compare analyze the impact of changes in GFCF on changes in value added (on NACE sector level). The figure on the left looks at changes in value added in the subsequent

<table>
<thead>
<tr>
<th>Table 3. Difference Between the Share of Investment and Share of Value-Added for NACE Sectors (in Percentage Points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BiH</td>
</tr>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>Fishing</td>
</tr>
<tr>
<td>Mining and quarrying</td>
</tr>
<tr>
<td>Manufacturing</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
</tr>
<tr>
<td>Construction</td>
</tr>
<tr>
<td>Wholesale and retail trade, etc.</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
</tr>
<tr>
<td>Transport and communication</td>
</tr>
<tr>
<td>Financial intermediation</td>
</tr>
<tr>
<td>Real estate, business activities etc.</td>
</tr>
<tr>
<td>Public administration and defense</td>
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<td>Education</td>
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<tr>
<td>Health and social work</td>
</tr>
<tr>
<td>Other community activities</td>
</tr>
</tbody>
</table>

**Source:** National statistics offices.
period (t+1) and the right figure shows changes in the same period: neither shows a strong relationship between the two (the correlation between the two indicators is extremely low [0.14]). This is to some extent expected since other factors, apart from the quantity of investment, play an important role, such as the quality of investment, technological progress and the structural differences between public services and sectors dominated by private firms.

There is mixed evidence to whether labor productivity has increased faster in sectors that have received a high share of investment. Investment in transport and communications has been significant in all (four) countries for which data was available, and the productivity increase in this sector has been greater than the average. In manufacturing the results are mixed: Croatia and the FYR of Macedonia had a greater than average productivity growth, while Montenegro and Serbia had positive but lower than average increases in productivity. On the other hand, productivity increases in the financial sector were high in all countries, while investment in this sector has been relatively low. The sectorial differences in investment and labor productivity are partly explained by the variations in capital (and labor) to output ratios.

The link between investment and productivity seems to be strong when comparing investment per employee and labor productivity. First, the correlation between sector labor productivity and GFCF per employee is 0.5. Investment per employee is the highest in the electricity, gas and water supply, transport and communication and financial sectors; and at the same time, these are the most productive sectors in terms of output per employee. Secondly, sectors that have invested more than average per employee have achieved a faster improvement in labor productivity.

Beyond the data imperfection one would have to consider that the link between sectorial investment, output and labor productivity is not as straightforward. Many other factors, apart from capital formation, influence output and productivity, human capital and endogenous technological progress being the most important ones. For example, the financial sector has attracted foreign investment, which in turn has brought positive spillovers (better organizational and managerial skills), so the increase in output and labor productivity
comes from this factor. Nonetheless, investment plays an important role as it not only brings new inputs but is the key driver of technological progress.

Another way of measuring investment efficiency is by looking at the allocation in tradable vs. non-tradable sectors. According to an IMF study on vulnerabilities in SEE, non-tradable sectors tend to have lower productivity. In the region, investment in non-tradable sectors accounts for between 66 and 76 percent of total investment, of which about a third is in public services. The countries that invest the most in the tradable sector are the FYR of Macedonia and Serbia.

Table 4. Increase in Sector Labor Productivity Compared to the Average, and Sector Investment Per Employee Compared to the Average

<table>
<thead>
<tr>
<th>Sector</th>
<th>Croatia</th>
<th>FYR Macedonia</th>
<th>Montenegro</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Labor</td>
<td>Labor</td>
<td>Labor</td>
<td>Labor</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>GFCF</td>
<td>Productivity</td>
<td>GFCF</td>
</tr>
<tr>
<td>Agriculture</td>
<td>72</td>
<td>198</td>
<td>127</td>
<td>39</td>
</tr>
<tr>
<td>Fisheries</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>116</td>
<td>638</td>
<td>209</td>
<td>135</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>132</td>
<td>135</td>
<td>62</td>
<td>85</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
<td>179</td>
<td>15</td>
<td>168</td>
<td>378</td>
</tr>
<tr>
<td>Construction</td>
<td>196</td>
<td>38</td>
<td>0</td>
<td>-54</td>
</tr>
<tr>
<td>Trade</td>
<td>22</td>
<td>98</td>
<td>201</td>
<td>255</td>
</tr>
<tr>
<td>Hotels and Restaurants</td>
<td>107</td>
<td>-116</td>
<td>-125</td>
<td>7</td>
</tr>
<tr>
<td>Transport and Communications</td>
<td>150</td>
<td>128</td>
<td>127</td>
<td>253</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>151</td>
<td>242</td>
<td>419</td>
<td>168</td>
</tr>
<tr>
<td>Real estate, etc.</td>
<td>58</td>
<td>-43</td>
<td>-89</td>
<td>175</td>
</tr>
<tr>
<td>Public administration and Defense</td>
<td>90</td>
<td>31</td>
<td>379</td>
<td>57</td>
</tr>
<tr>
<td>Education</td>
<td>92</td>
<td>83</td>
<td>158</td>
<td>18</td>
</tr>
<tr>
<td>Health and Social Works</td>
<td>68</td>
<td>-3</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>Other Public Services</td>
<td>7</td>
<td>70</td>
<td>42</td>
<td>32</td>
</tr>
<tr>
<td>Average</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: National statistics offices.
Figure 7. Gross Fixed Capital Formation by Sector (period average)


Source: National statistical offices.

Box 2: Investing in High Technology and R&D

Information and communication technologies play an important role in improving the quality of investment and can be a strong booster to growth. EU-10 countries have invested the most in ICT and as a result, ICT use and production have propelled labor productivity growth, in particular in manufacturing sectors (Piatkowski and van Ark 2007). However, the SEE countries have not followed the path of the more successful EU-10 countries, hence ICT use and production has had a much lesser impact in these economies.

ICT investments are largely impacted by adequate public policies, so policymakers can play a major role in enhancing the quality of investment through promoting greater use of ICT. The impact of public policies is even greater in the SEE economies which are just beginning to realize the potential productivity gains from ICT. To speed up the absorption of ICT, liberalization and more efficient regulation of the telecommunications sector should be pursued. At the same time, it is equally important to increase the ICT skills of the labor force by expanding education programs in these areas.

Data availability constraints do not allow for more thorough analysis of ICT investment trends in SEE. One way to approach this issue is to look at the structure of investment in machinery and equipment (M&E), which is for example available for Macedonia. Investment in M&E comprises products ranging from furniture to vehicles or optical instruments. In Macedonia, investment in high technology products accounted for some 38 percent of total investment in M&E. The increase in outlays for these products accounts for more than half of the total growth in investment in M&E since 2000. The increased use of high technology products is even greater when considering that outlays for telecommunications equipment fell in 2006, whereas between 2001 and 2005 they were on average about one third higher than in 2000. On the other hand, the share of spending on motor vehicles and engines fell from 27 percent to less than 19 percent in total M&E spending.

(continued)
Box 2: Investing in High Technology and R&D (continued)

Investment in research and development (R&D) is closely linked to high technology products and investment quality. R&D spending boosts innovation, which in turn improves productivity and leads to higher output growth. Yet, this is another area that reveals significant weaknesses among the SEE economies. The SEE region trails behind other European countries in research and development (R&D) spending. Average spending on R&D in the SEE countries is around 1 percent of GDP or less, which is similar to the ECA average, but only half of the EU-15 average. In addition, most of it is financed from public funding, while in the developed (OECD) economies some two thirds of R&D expenditure are financed by the private sector. The SEE countries have scored poorly on the World Bank’s Knowledge Economy Index, which measures economic incentives, institutional regime, education, innovation systems, and information infrastructure—all of which are relevant for R&D.
The Link Between Savings and Investment

The level of investment in any economy depends to a large extent on the availability of domestic savings. High-growth economies typically set aside a formidable share of their income: a national saving rate of 20–25 percent or higher, is not unusual (Growth Commission 2008). Some countries rely more on attracting foreign savings, however, domestic savings remains the most important factor. Savings rates in SEE have been extremely low. Moreover, national savings rates fell in each of the SEE countries except for Croatia between 2000 and 2005 (Kathuria 2008). At the same time, public savings rose during 2000–05 (except for the FYR of Macedonia), which means the fall in private savings was even greater and driven by robust advances in domestic consumption.

The Western Balkans Integration study of the World Bank finds a strong and positive correlation (of 0.8) between national savings and investment rates in SEE (Kathuria 2008). The report also finds that in the wider SEE region (including Bulgaria and Romania), Bulgaria and Croatia achieved the largest increases in savings and investment during 2000–05. Given the above link, domestic savings become extremely important. It suggests that governments should encourage the accumulation of domestic savings to help finance domestic investment and try to limit potential vulnerabilities related to tapping foreign savings (foreign loans).

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9. This correlation is also well-documented for developed countries (the Feldstein-Horioka puzzle).
The Role of the Financial Sector

Financial services are an important determinant for investment in any economy, big or small, developed or developing. Lack of access to external finance can discourage new entrepreneurs and incumbent firms from investing in new ideas which ultimately retards economic growth (Access Finance 2007). Erden (2005) and Ramirez (2006) also point out to the importance of credit for achieving higher investment rates. In countries with underdeveloped financial sector, firms are left with their own resources to realize their growth potential, but that is rarely enough. In addition, Mileva (2008) finds that transition economies with better-developed financial markets attract more foreign loans (which are mostly from parent banks to local subsidiaries) and around 50 percent of foreign loans are then used for financing domestic investment.

In SEE, the largest source of funding for investment remains firms’ own resources. Overall, in those countries for which data is available, between 54 and 71 percent of investment is financed from own resources. Only in Montenegro more investment was financed from credit (48 percent). The dependence on own funds vs. credit varies sector by sector. For example, in agriculture, manufacturing and trade, most investment comes from own funds. Then, as expected, only a small part of investment in public services is financed by loans. In contrast, firms in real estate and hotels business more often use loans to finance investment in Croatia and Montenegro (the two countries with developed tourism sector). Other sectors, such as mining and fishing, show mixed results.

The structure of source of financing confirms the importance of the financial (banking) sector for investment. Financing investment by credit is more common in Croatia and Montenegro, which have the most developed banking sector (as measured by the share of private sector credit to GDP). On the other hand, firms in BiH (Federation only) and the FYR of Macedonia, which have a less developed banking sector, rely more on own resources.

Firms in industries that depend highly on external finance tend to enjoy higher productivity growth, which makes the role of external finance even greater (World Bank 2008b). The productivity growth is even higher in countries with a more developed financial sector. This finding of the ECA-wide study is confirmed in the case of Croatia, which has achieved the highest financial development. All the sectors that depend highly on external finance10 have pulled off a higher growth in productivity.11

The dynamic financial sector played an important role in the enlargement of the capital base in the region, which points to a conclusion that access to finance had previously constrained firm expansion. The correlation between the credit to private sector to GDP ratio and private investment’s12 share in GDP is relatively high (0.6). Montenegro is the best example to illustrate the link between credit and investment; in 2002–06 it achieved the highest investment growth in the region (11 percentage points of GDP) and the strongest credit growth (rising from 8 percent to 43 percent of GDP).13

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10. Construction, mining, hotels and restaurants and financial services sectors.
12. GFCF private and change in inventory.
13. The robust credit growth in Montenegro in recent years was strongly driven by household borrowing, majority of which has gone to non-investment goods. Nonetheless, a non-trivial part has gone to finance capital formation.
While the link between credit growth and investment is strong, there seems to be little correlation between capital market developments and private investment in SEE. Despite the substantial deepening of the stock markets in the region in the past 4–5 years, GFCF growth has not necessarily responded to the capital market boom. In other words, countries which had large increases of stock market capitalization did not necessarily have a higher increase in private investment. For example, BiH’s private GFCF share in GDP rose by only 2.6 percentage points between 2003 and 2006, while the stock market capitalization went from 10 percent to over 100 percent of GDP in the same period.

Table 5. Sources of Financing of Investment

<table>
<thead>
<tr>
<th></th>
<th>BiH Federation</th>
<th>Croatia</th>
<th>Macedonia, FYR</th>
<th>Montenegro</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Own Sources</td>
<td>Credit</td>
<td>Own Sources</td>
<td>Credit</td>
</tr>
<tr>
<td>Agriculture, hunting and forestry</td>
<td>68.2</td>
<td>9.3</td>
<td>80.6</td>
<td>17.0</td>
</tr>
<tr>
<td>Fishing</td>
<td>0.0</td>
<td>83.3</td>
<td>58.3</td>
<td>47.2</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>46.2</td>
<td>26.8</td>
<td>18.5</td>
<td>78.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>51.4</td>
<td>34.0</td>
<td>81.3</td>
<td>18.2</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
<td>56.7</td>
<td>20.9</td>
<td>62.7</td>
<td>14.6</td>
</tr>
<tr>
<td>Construction</td>
<td>60.6</td>
<td>23.2</td>
<td>39.6</td>
<td>47.5</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>52.4</td>
<td>32.9</td>
<td>67.0</td>
<td>30.8</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>53.1</td>
<td>21.9</td>
<td>44.3</td>
<td>55.7</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>66.2</td>
<td>17.2</td>
<td>61.0</td>
<td>29.7</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>73.8</td>
<td>1.6</td>
<td>59.2</td>
<td>42.5</td>
</tr>
<tr>
<td>Real estate and business activities</td>
<td>53.8</td>
<td>30.3</td>
<td>38.8</td>
<td>41.5</td>
</tr>
<tr>
<td>Public administration and defence</td>
<td>82.6</td>
<td>1.4</td>
<td>27.7</td>
<td>9.0</td>
</tr>
<tr>
<td>Education</td>
<td>35.0</td>
<td>2.5</td>
<td>46.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Health and social work</td>
<td>40.8</td>
<td>6.1</td>
<td>30.9</td>
<td>41.5</td>
</tr>
<tr>
<td>Other social services</td>
<td>36.0</td>
<td>18.0</td>
<td>59.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Total</td>
<td>58.1</td>
<td>23.3</td>
<td>54.4</td>
<td>30.5</td>
</tr>
</tbody>
</table>

Source: National statistics offices.
At the same time, Montenegro’s private GFCF to GDP ratio increased by 15 percentage points, while stock market capitalization rose by merely 8 percentage points of GDP. Mileva (2008) also finds that portfolio flows in transition economies had no effect on capital formation.

The limited impact of the stock market boom on investment can be partly explained by the still low level of market deepening. The remarkable increase of stock market capitalization in SEE has been driven almost entirely by the increase of the value of shares of listed companies. Prices soared as foreign (portfolio) investors began to show interest in the (undervalued) listed firms. This initial increase in demand fueled domestic speculation which drove prices even further up. However, none of the SEE stock exchanges, except for Zagreb, has had an initial public offering. At the same time, again except for Croatia, there have not been any corporate bond issues in the region. Finally, venture capital is practically non-existent in the region, which is not unexpected. The ratio of venture capital to GDP is also very low in the more advanced European economies. To illustrate, in Poland and the Czech Republic it is about 0.1 percent of GDP. In addition, most of this venture capital goes to mature companies (Ben-Ari and Vonortas 2005).

The recent turmoil in global financial and capital markets could have negative spillover effects on the banking sector in SEE and in turn become a constraint on private investment. According to Raiffeisen Bank’s CEE Banking report 2008, credit growth in SEE remained robust in 2007 and, to a lesser extent, in the first half of 2008, despite the global credit crunch. At the same time, investment growth was also strong in 2006 and 2007 in most SEE economies. However, few European banks have a sizeable share of the banking sector in SEE, and risks remain that if some of these banks are more starkly affected by the liquidity crisis, the credit supply to local banks in SEE is reduced. In such case, investment growth is likely to decline in many SEE economies.

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Remittances as a Source of Investment

The large remittance flows to the region may have led to increased investment. The Migration and Remittances report of the World Bank (2006) finds significant empirical evidence that remittances have enabled (directly or indirectly through savings) higher investment rates. These findings apply for both European countries and for other regions of the world. According to the IMF (2003), remittances are not primarily meant to serve as capital for economic development, but as compensation for poor economic performance. Nonetheless some part of remittances is used for investment; it is noted in IMF (2007) that a quarter of remittance flows in the FYR of Macedonia have been used for investment.

The SEE economies are large recipients of remittances even in global terms, in particular Albania, BiH, the FYR of Macedonia,15 and Kosovo. While detailed and reliable data on remittance flows and their use is lacking in SEE, the importance of these flows for capital formation should not be neglected. More detailed research is needed to analyze the exact impact of remittances on capital formation in order to determine how government policies could channel a larger part of these funds towards investment.

15. An OECD study puts these three countries among the top 20 recipients of remittances globally.
FOREIGN DIRECT INVESTMENT IS POSITIVELY RELATED TO DOMESTIC PRIVATE INVESTMENT; IT IS IMPORTANT FOR CAPITAL FORMATION, BOUGHT IN TERMS OF GREEN-FIELD INVESTMENT AND ACQUISITION, BECAUSE IT NOT ONLY INCREASES THE CAPITAL STOCK, BUT ALSO LEADS TO TECHNOLOGICAL SPILLOVERS. A SUMMARY OF RECENT LITERATURE ON THE RELATION BETWEEN FDI AND ECONOMIC GROWTH BY LIM (2001) FINDS THERE IS GOOD EVIDENCE THAT FDI EFFICIENCY SPILLOVERS EXIST AND THAT FDI IS POSITIVELY CORRELATED WITH GROWTH. SPILLOVERS COME THROUGH THE INTRODUCTION OF NEW TECHNOLOGIES WHICH MEANS THAT FDI STIMULATES PRIVATE INVESTMENT IN NEW TECHNOLOGIES. THE NEW TECHNOLOGIES, TOGETHER WITH THE NEW ORGANIZATIONAL SKILLS, OVERSEAS MARKETS AND SUPPLY CHAINS, MAY ACTUALLY BE WORTH MORE THAN THE INITIAL CAPITAL ITSELF.

WHEN IT COMES TO ASSESSING DOMESTIC CAPITAL FORMATION IN AN ECONOMY, THE TERM “FOREIGN DIRECT INVESTMENT” IS A MISLEADING CONCEPT. FDI INCLUDES NOT ONLY PHYSICAL INVESTMENT OF FOREIGN-OWNED COMPANIES IN HOST ECONOMIES (SUCH AS GREEN-FIELD INVESTMENT), BUT ALSO THE TRANSFER OF EXISTING ASSETS FROM DOMESTIC TO FOREIGN OWNERSHIP (ACQUISITION OF DOMESTIC BY FOREIGN FIRMS). WHEREAS THE FORMER DIRECTLY CONTRIBUTES TO THE INCREASE OF CAPITAL.


17. IN THE CASE OF MONTENEGRO, A SIGNIFICANT PART OF FDI HAS GONE TO PURCHASE OF LAND, WHICH ALSO DOES NOT DIRECTLY INCREASE THE CAPITAL BASE, BUT ULTIMATELY LEADS TO CONSTRUCTION PROJECT DEVELOPMENT.
stock, the latter has no direct and immediate effect on capital formation. Nonetheless, privatization and acquisition of domestic by foreign firms leads to further investment flows (capital formation) and is fundamental for raising firm productivity.\textsuperscript{18} As a matter of fact, most FDI inflows in SEE, and throughout the world, go in the second category: purchase of existing capacities (firms) by foreign firms. In SEE this is even more so, as FDI has been mostly related to the privatization process where state-owned firms were sold to foreign companies.

Foreign investment has stimulated investment across the SEE region. Private capital formation rose faster in those economies that managed to attract more FDI. In 2001–07, Montenegro recorded the highest level of foreign investment (relative to GDP); consequently, its ratio of private investment to GDP rose by some 13 percent (highest in the region). The case of Albania confirms this finding from the other side of the spectrum; Albania was the least successful country in attracting FDI, and its private investment to GDP ratio actually slightly declined in this period. However, not all countries fit in the picture. Bosnia and Herzegovina and the FYR of Macedonia were moderately successful in getting foreign investment, but significant increases in capital formation have not materialized.

Foreign investment in recent years has been concentrated in only a few sectors: manufacturing and financial sector received highest interest of investors. SEE’s banking sector has attracted substantial foreign investment; in most economies foreign-ownership in the sector is above 80 percent. The FYR of Macedonia is a slight outlier in this regard, because: (1) it still has a relatively low share of foreign presence in the banking sector, and (2) foreign banks that are present on the market, entered earlier in the transition process. Similar trends

\textsuperscript{18} See Mileva (2008) on the spillover effects of FDI in transition economies.
of bank consolidation are observed both in the EU-15 and in the EU-10. A considerable share of foreign investment in SEE has gone into manufacturing, though much less than in, for example, Slovakia. In 2000, the share of projects in manufacturing peaked to 74 percent. As a matter of fact, SEE firms, unlike Slovak firms, have not managed to seize the opportunities presented by the trends of offshoring in developed economies. Hence, the high share of foreign investment in (non-tradable) services. On the other hand, some of the most emerging sectors for FDI in SEE in recent years have been business services, automotive components and software (FIAS 2007).

FDI is Associated with Higher Quality of Investment

Empirical evidence shows that foreign-owned firms tend to have higher productivity growth than domestic private or state firms. Notwithstanding the fact that the productivity difference may be partly explained by the initial difference at entry (“cherry-picking” approach of foreign firms); in number of cases foreign-owned firms have shown higher “within” productivity growth. In addition, new technologies from foreign firms can have positive spillover effects on domestic firms. The literature distinguishes between horizontal spillover effects (within an industry) and vertical spillover effects (generated by linkages in the production or value chain).

Source: Eurostat.

19. Off shoring occurs when a firm moves part of its value chain to a foreign location. Often times, off shoring goes hand in hand with outsourcing, which is use of goods and services produced outside the firm (instead of producing in-house).
In most cases, foreign entry led to improved productivity in those sectors. The link between FDI and TFP is well documented. Djankov and Hoekman (2000) analyze firm-level data for the Czech Republic during 1992–96 and find that foreign investment has the predicted positive impact on the TFP growth. In SEE, the link between FDI and productivity is well confirmed in the financial sector: productivity increases were higher than average in all countries for which data is available. From a country perspective, three out of the four sectors with substantial FDI in the case of Croatia, the FYR of Macedonia and Serbia had higher than average productivity increase (data not available for the other countries).

Table 6. FDI in Key Sectors and Change in Labor Productivity in Those Sectors (in percent)

<table>
<thead>
<tr>
<th>FDI by Sector (period average)</th>
<th>Labor Productivity* (change in period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>28.3</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>10.4</td>
</tr>
<tr>
<td>Trade</td>
<td>13.0</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>29.2</td>
</tr>
<tr>
<td>Average productivity</td>
<td>16.7</td>
</tr>
</tbody>
</table>

*Difference (in percent) compared to average productivity (data available only for 2006).
Source: National statistical offices.

In most cases, foreign entry led to improved productivity in those sectors. The link between FDI and TFP is well documented. Djankov and Hoekman (2000) analyze firm-level data for the Czech Republic during 1992–96 and find that foreign investment has the predicted positive impact on the TFP growth. In SEE, the link between FDI and productivity is well confirmed in the financial sector: productivity increases were higher than average in all countries for which data is available. From a country perspective, three out of the four sectors with substantial FDI in the case of Croatia, the FYR of Macedonia and Serbia had higher than average productivity increase (data not available for the other countries).

Figure 11. Greenfield FDI in Selected Transition Economies*

*Note that comparable data on the size of projects is lacking.
The SEE region has so far lagged in attracting greenfield foreign investment. Apart from being concentrated in only few sectors, FDI has also been mostly in privatization proceeds and sale of assets. Greenfield investment has been marginal, which means only a fraction of the FDI contributed directly to gross fixed capital formation. Croatia has been the best performer in terms of attracting foreign investment, but even there, the number of greenfield FDI projects has been lower than in the Baltics or some of the other more successful EU-10 countries.

Nonetheless, the increasing flow of foreign investment will stimulate fixed capital formation in the future. According to FIAS (2006), almost half of foreign businesses established in the SEE reported plans to further expand their operations, and this would be through expansion of existing facilities. Only 12 percent of established foreign businesses said that they were considering scaling down their operations and/or relocating to other countries.

Last but not least, geography seems to matter for foreign investors. Foreign investment in SEE has followed two patterns in terms of where investors are coming from. The bulk of foreign investment has come either from neighboring countries or from European companies that have taken a regional approach in entering the SEE market. Indeed, in fact all countries, except Montenegro which is surrounded by other SEE countries, immediate neighbors were the largest or among the top five investors. At the same time, large European companies have targeted the entire region as one market. For example, Austrian banks have acquired local banks in all countries, except for the FYR of Macedonia. Deutsche Telecom (or its subsidiary Magyar Telecom) owns the incumbents in Croatia, the FYR of Macedonia, and Montenegro.

<table>
<thead>
<tr>
<th>Table 7. FDI Stock in SEE by Country as Percent of Total Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BiH</strong></td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Netherlands</td>
</tr>
<tr>
<td>Hungary</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Switzerland</td>
</tr>
<tr>
<td>Greece</td>
</tr>
</tbody>
</table>

Source: National central banks.
Public Investment Can Fuel Private Investment

The literature on the nexus of public and private investment in developing economies is mixed. A recent survey of studies on the impact of infrastructure on growth found that a positive and significant link in 63 percent from a total of 140 specifications in 64 papers (Straub 2008). The explanation for the different views, on whether public investment crowds-in private investment, may be that other factors influence this link.20

The Growth Commission (2008) reaffirms that it is difficult to sustain rapid growth without high rates of public investment. Investment in infrastructure, but also in education and health, crowds in private investment by increasing the efficiency of private capital. Several studies have concluded that East Asia’s much higher investment in infrastructure explains a large part of its faster growth than Latin America (Economist 2008).21 Erenburg (1994) provides evidence that public investment in infrastructure stimulates capital formation.

20. Erden (2005) and Ramirez (2006) find that availability of credit strengthens the crowding-in effect. Atukeren (2006), taking note of the conflicting findings on this issue, shows the crowding-in also depends on the overall economic environment. For increases in public investments to lead to increases in private investments, the right economic, political, and legal framework (including the rule of law) should be in place for the private sector. If the business climate is poor, public investment could have a “crowding-out” effect. According to an IFC study on the trends in private investment in developing countries (IFC 2001), corruption influences the effects of public investment on private investment. Corruption lowers the quality of public investment, which is in turn associated with lower private investment.

21. The World Bank estimates that a 1 percent increase in a country’s infrastructure stock is associated with a 1 percent increase in the level of GDP (Economist 2008). Erden (2005) finds a 10 percent increase in public investment is associated with a 2 percent increase in private investment.
Public Infrastructure in SEE

Investing in infrastructure is vital for promoting investment and stimulating economic growth. In situations where the public sector can carry out more efficiently such infrastructure projects, it positively affects returns on private investment; hence, it increases the incentive and opportunities for private investment. Firms in countries with access to modern telecommunications services, reliable electricity supply, and efficient transport links, are more productive that those operating in countries without them. Hence, infrastructure deficiencies which are existing in SEE countries, negatively affect private investment and growth. The SEE economies are relatively poor, so it is not surprising that infrastructure is in a worse shape than in the more advanced European economies. For instance, the quality of public infrastructure in the SEE economies, especially of transport and telecommunications, is significantly lower than in EU-10 or faster growing economies and impacts negatively economic activity. The endowment with infrastructure is however very uneven within the region: Albania and Kosovo started the transition with some of the poorest existing infrastructure in Europe, compared to a rather favorable situation is Croatia or Serbia. Regional disparities are also considerable as regards infrastructure. Other factors such as the level of competition, regulatory framework and efficiency of operations and maintenance also are important determinants of the infrastructure stock and quality.

Service costs are important for all firms, and to some extent they depend on public investments. High-quality market services such as transport or telecommunications affect production costs and consequently the competitiveness of firms in all sectors. Furthermore, the quality of public services can also influence the attractiveness to foreign investment. According to the World Bank (2008), services contribute on average around 10–20 percent to the production cost of a product and account for all trading costs (transport, trade finance, insurance, communications, and distribution services).

Public investment in SEE as a share of GDP is substantial, because of the large infrastructure needs and poor quality of infrastructure. Public investment has a significant share in gross fixed capital formation in several SEE countries. While overall public investment is relatively high, it remains unclear to which extend it has been inductive to private investment. Moreover, government capital outlays have increased in most countries in recent years, despite the substantial downward adjustment of overall government expenditure. Within the region, Albania, BiH and Kosovo dedicated larger shares of spending to capital projects, thanks to the large funds coming from the donor community. At the same time, these three economies had a poorer endowment with public infrastructure at the beginning of the transition (and after the conflict in the case of BiH and Kosovo). Of the other countries, Croatia and Montenegro spend more on capital investment; in Croatia, most of these expenditures went to upgrading the road network.

Capital investment in SEE as a share of GDP is higher than in the more advanced European economies. Most economies in the region have higher capital expenditures than the EU-10 countries with largest capital spending. The difference is even greater when comparing with the developments in the EU-10 in their early transition period. Capital spending in the second half of the 1990s in the EU-10 was about 3 percent on average. These countries began to dedicate more to capital spending (close to 4 percent of GDP) after joining the EU in 2004, which could be partly explained by the increased availability of EU funds. Having in mind the already high levels of public investment in most SEE countries
and the limited fiscal space, the focus should be on assessing and improving the efficiency of public investment projects.

While the positive effects of public infrastructure on increasing the rate of return on private capital are clear, improving public infrastructure does not necessarily require public spending. This is especially important for most SEE economies where public investment has a significant share of GDP. Involvement of the private sector in public infrastructure projects through Public Private Partnerships (PPPs) can be an effective way to introduce

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<th>Table 8. Public Investment (as percent of GDP)</th>
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Source: IMF staff reports.

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<th>Figure 12. Government Capital Expenditure in the EU-10 (as percent of GDP)</th>
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Source: Eurostat.
private sector efficiency in service delivery to sectors traditionally dominated by the public sector and can limit the government burden on the economy (or overcome fiscal space constraints). PPPs increase the role of the private sector in the delivery of public services, such as water, electricity or telecommunications, and are expected to improve the quality and the affordability of access to services provided. There is evidence that investment under PPPs is positively associated with aggregate private investment. However, successful use of PPPs requires an enabling environment (political stability, rule of law etc.), and having an appropriate framework for PPPs would ensure the effectiveness of the private-public engagement.

The Quality of Infrastructure Matters

The “Unleashing productivity” report (World Bank 2008b) finds that improving infrastructure quality is one of the most important factors for boosting productivity growth in the ECA region. The infrastructure stock, together with its quality, has the greatest impact on productivity. For example, the study shows that if infrastructure quality in the ECA region were raised to the level of the median industrial country; that would raise productivity growth in the ECA region by 1.25 percentage points. In Croatia, the productivity impact of improving infrastructure exceeds that of improving financial depth. Not only the quality of infrastructure, but also the infrastructure stock in SEE is below levels in industrial countries and fast-growing regions such as East Asia.

Telecommunications quality has the greatest impact overall in the ECA region; in SEE even more so than in the EU-10. The two other measures of infrastructure quality in the

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22. Infrastructure quality is a weighted average of three different measures of quality—waiting time for installation of main line telephones; percentage of electricity losses in transmission and distribution; and share of paved roads in total roads.

23. Similarly, if infrastructure stock were also raised to the level of the median industrial country, that would raise productivity growth by an additional 0.47 percentage points.
above mentioned report are the quality of electricity and roads. The continuous improvements in the telecom sector in all countries and the shift to mobile services are likely to reduce the impact of telecom quality in the near future. Nonetheless, the importance of this component is large, and since telecom operators are privately owned throughout SEE, public policies can only have an indirect impact. On the contrary, electricity generation and transmission and road building is an activity where the state plays a predominant role currently. Hence, governments can reap the benefits from improved electricity and road quality through more public investment in these sectors as well as by increasing the efficiency of operations.

The Crowding-in and Crowding-out Effects in the Case of Croatia and the FYR of Macedonia

Public capital spending in Croatia as a share of GDP is relatively high compared to other European countries; it is more than three times higher than in the EU-15 and 40 percent higher than in the New Member States (NMS). In addition, the NMS had access to substantial grant financing for infrastructure from the EU, both from the pre-accession and the cohesion funds. The bulk of capital spending has gone to transport infrastructure (which is 2 percentage point of GDP higher than in comparator countries). Croatia doubled the length of its motorway network between 2001 and 2007 to over 1,100 kilometers, and now has a motorway network which is more developed than in some of the EU-15 countries, measured per area or per population. Croatia has 2.06 km of motorway roads per 100 km2 compared to 1.65 km in the EU-15 and 26 km per 100,000 inhabitants compared to 14 km in the EU-15.

The decision to invest in the motorway network, however, was not always based on a sound cost-benefit analysis or economic justification: several studies concluded that the road network in the late 1990s provided sufficient capacity (with few exceptions) for actual and projected demand (Louis Berger SA 2002). Croatia’s heavy investments in new motorways have been at the expense of maintaining the non-motorway network and have resulted in considerable financial obligations to service the debt needed to finance this investment.

While it is difficult to estimate what would have been the optimal level of investment in road infrastructure in Croatia, motorway investments in recent years may have been excessive, in terms of capacity and quality standards (Louis Berger SA 2002; European

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Box 3: PPPs in the Case of Croatia

A recent study of PPPs in the road sector in Croatia (Louis Berger SA 2002) concluded that Croatia’s concessions model allows the government to implement major infrastructure projects under strong fiscal constraints. However, these arrangements have also brought numerous challenges and contingent liabilities. To mitigate downside risks of PPPs, it is necessary to ensure greater competition in road maintenance services, use of competitive contracting, introduction of incentive schemes for publicly-owned road operators, and development of a competitive PPP market for the provision of road infrastructure.
Commission 2003). The most obvious and direct “crowding-out” effect has been on main-
tenance and rehabilitation of the existing road network. Opportunity costs were high in
other areas, notably education. Looking ahead, the central challenge for Croatia in the
transportation sector is to ensure fiscal sustainability of the system by adopting a more dis-
ciplined approach to the planning and prioritization of investments, and making adequate
provision for maintenance of assets.

The FYR of Macedonia, on the other hand, is among the countries with the lowest rates
of public investment to GDP in the region (both SEE and CEE). The historically low public
investment levels in the FYR of Macedonia are one of the determinants for the low level of
private investment. General government capital expenditures averaged only 3.5 percent of
GDP over the 2003–07 period, below the 4.5 percent of GDP average for the CEE economies.
This has led to a significant deterioration in the quality of public assets and has prevented the
country from catching up with more advanced transition economies both in terms of size
and quality of public assets. The size of road and rail networks, while being denser compared
to SEE countries, lags behind that in the NMS (World Bank Forthcoming).

The different paths of Croatia and the FYR of Macedonia have led to different percep-
tions of the role of infrastructure on business activity. Investment in transport infrastructure
in Croatia had a positive impact on doing business. According to the Business Environ-
ment and Enterprise Performance Survey (BEEPS) of the EBRD and the World Bank, in
1999 (before the large motorway investment started), more than 40 percent of firms per-
ceived the quality and efficiency of roads as bad,24 even more so than in the FYR of Mace-
donia, where “only” 27.4 percent of firms found road quality to be bad. Then in BEEPS
2002, just little over 10 percent of firms found transportation as a problem of doing busi-
ness, and in 2005 this figure fell to less than 8 percent of Croatian firms. In the FYR of
Macedonia, on the contrary, 16 percent of firms in 2002 stated that transportation is a
problem for doing business, and the number of firms having stating this problem rose to
over 18 percent by 2005 (more than the SEE average of 16 percent).

The FYR of Macedonia has underinvested in public infrastructure in general, while
Croatia has overinvested in road infrastructure relative to other sectors (such as energy).
On the whole, both countries have not fully taken into account the network character of
public infrastructure, which has important consequences for the overall impact of public
investment on private investment and on economic growth. Businesses normally depend
on numerous public services (roads, airports, post, electricity, and so forth), and the effi-
ciency of certain public infrastructure depends on the other public services. Constructing
a state-of-the-art airport would not bring as much as value added if telecommunications
services are rudimentary in the country and if power shortages are a daily experience.

24. Includes answers: slightly bad, bad and very bad.
Sustained economic growth requires substantial rates of investment; fast growing economies invest a large share of the output in order to bring more resources to the production process. Investment is not only a direct booster to output, it also brings new, more productive, technologies and stimulates TFP growth.

Output growth in SEE in the post-conflict period in the 1990s was mostly driven by TFP. The improvements in TFP that came from the simple reallocation of resources through privatization have been partly exhausted, so TFP-led growth cannot be the single driver of growth in the future. The role of factor accumulation (capital and labor) will be crucial for accelerated growth. Moreover, increasing the quantity and quality of investment is instrumental for maintaining and accelerating TFP growth. Hence, achieving higher investment rates is an overarching objective and this poses an important challenge for future growth in the SEE economies. It would also allow for a better utilization of labor, solve some of the current social issues and improve the relatively low living standards.

Since the start of the transition process, private investment rates in SEE, and its pace of growth, have been low. Despite recent notable increases of private investment in some SEE economies, growth in others has been slowing. At the same time, the structure of investment is not the most conducive to rapid growth in a global environment. More is spent on construction than on machinery and equipment, and only a quarter of total investment has gone to tradable sectors. R&D spending is very low, and even though insufficient data is available on spending on ICT, there is no evidence that SEE firms are investing massively in ICT either.

The recent developments in the financial sector in SEE have boosted capital formation. Firms in SEE relied excessively on their own funds for financing investment. The recent sharp increases in credit to the private sector have helped finance more investment.
Capital markets at this stage do not seem to be of strong relevance for investment, but as the markets continue to deepen, their role should rise. Most SEE economies are significant recipients of remittances, but there is insufficient data to assess whether remittances have an impact on private investment. In addition, the current international financial turmoil could strain the capacity of domestic banks and companies to access foreign savings.

Foreign investment has stimulated investment across the region; however, the countries have failed to attract as much FDI as many of the New Member States. As privatization-related FDI is now expected to die out, there is no evidence yet of a material shift to greenfield investment, which could facilitate a move up the value chain, as witnessed in some of the new Member States. FDI contributes directly to capital formation, but also has positive spill over effects on domestic firms.

It is very difficult to ensure sustained rapid growth without also keeping up sufficient rates of public investment. This study points out to the large infrastructure deficiencies in the region compared to the EU-10 countries, despite the relative higher investment rates of public investment. Hence, improving the quality of public investment is a key issue for the region. The paths of Croatia and the FYR of Macedonia point out the need to properly plan and implement public infrastructure projects in order to maximize the “crowding-in” effects and to eliminate any negative (crowding-out) effects.


———. Forthcoming. “Improving the Management of Secondary and Tertiary Roads in the South East Europe Countries.” Transport Unit, Sustainable Development Department, Europe and Central Asia Region.
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*40' in height and 6-8" in diameter

Pounds | Gallons | Pounds CO₂ Equivalent | BTUs
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The economies of Southeast Europe (SEE) have witnessed significant economic improvement since the 1990s. Growth was particularly strong in the past six years, but lower compared to other fast growing countries. Investment is a key driver of improved economic performance.

This paper looks into private investment trends in SEE, and explores some determinants of private investment, such as the financing sources for investment, the contribution of foreign direct investment, and the role of public investment. This report shows that investment rates in SEE are substantially lower than among the EU-8 and the fast growing East Asian economies, which could explain partly the slower economic growth in SEE. Investment levels have started to increase in recent years in most SEE countries. Private investment has been particularly low. Hence, achieving higher investment rates and better quality investment poses an important challenge for policy makers in SEE.

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