

# **Understanding Belgrade Services Sector**

## **Report on Survey Results**

**Belgrade, January 2007**



This report presents the results of a survey performed by The Foundation for the Advancement of Economics (FREN) in autumn of 2006, based on a concept and questionnaire developed by the Center for Advanced Economic Studies (CEVES).

The results presented in this report are not for citation.

The survey was made possible by our sponsors, to whom we express our warm gratitude.

### Research sponsor



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# 1. Introduction

In the global economy, financial capital is increasingly being directed at countries abundant in knowledge and skills. Knowledge is fueling economic growth and development in every region of the world. Rapid advances in Information and Communication Technology (ICT) provide the means for developing countries to accelerate their progress or even leapfrog stages of development, which would enable their integration into the global economy. Combined with the liberalization of international trade and investment, ICT has increased the tradability of services and created new types of tradable services, with international outsourcing of particular types of services now becoming increasingly common.

The “new” service sector, particularly knowledge based services, may well have been booming in Serbia over the past few years. A large body of anecdotal evidence, as well as some indirect statistical evidence, suggest that such services are present and growing, but direct evidence is lacking due to the weaknesses of official statistics. Serbia is on a path of very strong growth, largely fueled by the need to fill the gaps in the country’s services production, as it recovers from international isolation and policy mismanagement of the previous period. This growth – thanks to Serbia’s educated workforce and its central position in Southeast Europe – can be extended to the international arena. As its policy makers complete the privatization of the traditional economy, the slim likelihood of rebirth of its traditional industries, devastated during the ‘90s, makes the knowledge economy a unique and much needed opportunity for Serbia to transform itself.

FREN’s and CEVES’ research is beginning to fill a great gap in understanding the new services sector in Serbia. Detailed and rigorous survey of the services sector in Belgrade – bound to account for the lion’s share of the new service sector in Serbia – assesses the structure, dimensions, key

development factors and development potential of the service sector in Serbia. To seize the opportunity and transform Serbia into a knowledge economy, carefully designed policies are needed, aimed at enhancing human capital and developing appropriate infrastructure. Our research will provide policy makers and businesses with consistent information required in order to build on Serbia's strengths and remove obstacles.

## 2. Main findings

**GDP of Belgrade services sector**<sup>1</sup> (excluding state owned companies and financial sector) in 2005 was around 2.4 bn euros or about 11% of total Serbian GDP<sup>2</sup>.

**Impressive growth:** number of employees in the sector increased by 11% in 2005 and nominal growth of GDP (in euros) is staggering 24%!

**High productivity:** GDP per employee in the sector is close to 18 thousand euros, slightly more than twice the average for the entire Serbian economy. In ICT and engineering group it is as high as 29 thousand euros per employee!

**Vibrant and dynamic sector:** 62% of the companies from the sector have been founded in the last five years. 33% of the managers had worked in companies that don't exist now. However, managers have on average 10 years of experience in their branch.

**Noteworthy revenue from exports:** export of services for the companies from the sector in 2005 was approximately 320 mn euros, or 13% of their GDP. In "tradable" sector (see Methodology) this percentage is almost 17%. However, it seems there is room for improvement.

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<sup>1</sup> Approximately 30 thousand companies, with approximately 135 thousand employees.

<sup>2</sup> Unfortunately, total GDP for Belgrade alone is not available.



### 3. Methodology<sup>3</sup>

- A survey of 359 private companies from Belgrade services sector was conducted during October of 2006.
- NACE codes were used to identify companies that fall into services sector and to split them in the groups
- Companies were divided in three groups:
  - *Non-tradable*. 150 of these companies were surveyed. Group comprised of “traditional” services – wholesale and retail trade, transport, caterers and restaurants, and other non-tradable services (e.g. hair-dressers, small repairs etc).
  - *Tradable, ICT and engineering*. 108 of these companies were surveyed. Group comprised of ICT companies, companies that do engineering design etc.
  - *Tradable, other*. 101 of these companies were surveyed. Relatively heterogeneous group comprised of marketing companies, media production companies, business consultancies, book-keeping agencies, lawyers, dentists, medical services, etc.
- To create the set from which sample was created, two data bases were used:
  - Solvency Center data base – detailed, financial and many other data about companies, but it includes only enterprises and sole proprietors are not included in this data base
  - VAT data base – includes both enterprises and sole proprietors, but not much data about performance of companies

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<sup>3</sup> Methodology developed for CEVES’s study *Private Sector Development Facts* was used as a starting point for creating methodology for this research.

- 30,656 total companies (enterprises and sole proprietors) identified in VAT data base that operate in Belgrade and fall into services sector. Vast majority of them (66%) are retail and wholesale trade companies.
- After SC and VAT data bases were merged, random sample was created, taking into account companies activity (based on NACE codes) and company size (based on number of employees)
- As the focus of the research was on the companies from “new services” group, companies from non-tradable group were underweighted in the sample (compared to their number in the entire population), while companies from tradable group were overweighed
- When extrapolating to the entire population, weights were assigned to the answers based on companies share in total population (based on activity and number of employees), so as to get results representative of the entire population
- The survey did not include following groups of companies
  - State owned companies
  - Companies from the financial sector (banks, insurances, brokers), as there is enough data about them
  - Large companies with diverse activities

## 4. Research results

We now show detailed results to selected questions from the survey. These results represent Belgrade's services sector, excluding state owned companies, financial sector companies, and large companies with diverse activities (see Methodology). All in all, they represent 30,656 companies and about 135 thousand employees. For simplicity, we call this group Belgrade services sector, or just "the sector". Companies from the sector were divided into three groups (see Methodology), and most the results are shown for each of these groups. Special attention was given to companies that export these services, and at selected questions we individually analyze this group of companies (companies that do business abroad).

Many more results were obtained in the research, but due to the limitations of this report, we don't show them here.

### GDP of Belgrade services sector

GDP of Belgrade services sector<sup>4</sup> in 2005 was around 2.4 bn euros or about 11% of total Serbian GDP (21.1 bn euros). Brake down by groups is shown in Table 1.

**Table 1:** GDP of Belgrade services sector, 2005

	GDP in millions of euros	Number of companies	Share in GDP	Share in no. of comp.
Total	2.395	30.656	100,0	100,0
Non tradable	1.500	25.293	62,6	82,5
Tradable	895	5.363	37,4	17,5
ICT and engineering	547	2.484	22,8	8,1
Other	348	2.879	14,5	9,4

<sup>4</sup> As defined in the first paragraph of this section.

A word of caution is in order here. As companies are quite sensitive when it comes to their finances, the questions about financial results were designed so as to be as little intrusive as possible, eliciting imprecise but robust answers. This means that the results obtained were calculated indirectly and with some simplified assumptions and should be taken with caution. A different difficulty arises from the existence of survivor bias – the fact that the survey does not account for the fact that some companies stopped operating in 2005 and 2006. Furthermore, financial data for the companies that started operating in 2005 and 2006 were also not considered. Inclusion of the former group would have lowered the growth rates, while inclusion of the later would have unclear effects on them. Inclusion of either group would have increased the level of GDP. In spite of all the reservations stated above, the GDP figure is fairly reliable and indicative of the size of the sector, and also provides valuable information to the significance of the sector, as well as to the relations of the different groups that make up the sector.

## Impressive growth

Number of employees in the sector increased by 11% in 2005 and nominal growth of GDP (in euros) rose by staggering 24%! Brake down by groups is shown in Table 2.

**Table 2:** Growth of nominal GDP (in euros), total revenue (in euros) and number of employees in Belgrade services sector, 2005

	Nominal growth of GDP	Growth of total revenue	Growth of no. of employees
	in %, year-on-year		
Total	23,8	32,6	10,8
Non tradable	22,6	36,2	10,3
Tradable	25,7	28,4	12,2
ICT and engineering	22,9	24,9	8,1
Other	30,2	32,8	18,3

With all the reservations expressed in the section about GDP level, this is a remarkably high growth. Highest growth is in the *Tradable, other* group, but there is very high growth of over 20% across the board.

It is interesting to note that these numbers are actually generally in line with the official Bureau of Statistics numbers that seemed suspiciously high at the first glance.

### High productivity

Belgrade services sector has very high productivity (17.7 thousand euros of GDP per employee), more than twice as high as average for entire Serbian economy (approximately 8.6 thousand euros of non-agricultural GDP per employee). Break down by groups is shown in Table 3.

**Table 3:** Productivity, gross wage and unit labor cost, 2005

	Productivity (GDP/employee, in euros)	Productivity, index (total =100)	Average yearly gross wage (in euros)	Unit labor cost
Total	17.746	100	4.919	0,277
Non tradable	14.858	84	4.603	0,310
Tradable	28.634	161	6.012	0,210
ICT and engineering	29.238	165	7.244	0,248
Other	26.248	148	5.128	0,195

Productivity is remarkably high in *ICT and engineering* group, 68% higher than the average for the entire sector and more than three times higher than the Serbian average! It is also quite high in *Tradable, other* sector, while it is 16% below the average in the *Non tradable* group.

However, *ICT and engineering* group also has highest average gross wage (604 euros at a monthly level, or 7,244 on yearly level), making unit labor cost of this group higher than that of *Tradable, other* group. But, because of relatively

low productivity, group *Non tradable* has by far the highest unit labor cost.

## Noteworthy revenues from exports

Export of services for the companies from the sector in 2005 was approximately 320 mn euros, or 13% of their GDP. Break down by groups is shown in Table 4.

**Table 4:** Exports of Belgrade services sector, 2005

	Exports of services, mn euros	Exports/GDP, in %
Total	316,3	13,2
Non tradable	168,4	11,2
Tradable	147,9	16,5
ICT and engineering	72,9	13,3
Other	75,0	21,6

In *Tradable* group this percentage is almost 17%. However, it seems that there is still room for improvement. Exports in *ICT and engineering* group are lower than we expected, and if Serbia is to become a respectable offshoring destination for software development, the ratio of services export to GDP in this group has to be much higher.

## Vibrant and dynamic sector

62.3% of the companies from the sector have started doing business in the last five years. When it comes to large companies (more than 7 employees), only 31% have been founded in the last five years. Comparing companies from *Non-tradable* and *Tradable* sector, on average 64% of companies from *Non-tradable* sector started their business in the last five years, while 52% of companies from *Tradable* sector did so. But, when we look just at the companies from the *Tradable* sector that do business abroad, 67% of them have started doing business in the last five years, making them the “youngest” group in population. However, when it

comes to managers experience, there is almost no difference in tradable companies that don't do business abroad (average manager experience 13 years) and those that do (average manager experience 12 years).

Managers of the companies from the sector have on average 9.7 years of experience of working in the industry sector covered by their company. However, there is significant difference when we compare companies from *Non-tradable* and *Tradable* sector. While average experience for managers in *Non-tradable* companies is 9 years, for those in companies from *Tradable* sector it is 13 years.

33% of the managers from the sector have, during their working life, been employed in a company that does not exist any more. But, while this is true for 35% in the *Non-tradable* sector, it applies to only 21% of the managers from the *Tradable* sector.

## **Use of ICT**

### Number of computers

On average, companies from the sector own 2.9 computers. But, while 67% of companies have at least one computer, as much as a third of the companies don't own even a single computer. As expected, however, there are big differences when comparing different groups. In *Non tradable* group, the average is 2 computers per company, while in *Tradable* group it is 6. When it comes to companies from tradable sector that do business abroad, this number is as high as 11, while in tradable companies that don't do business abroad it is just 4. Furthermore, while 98% of companies from tradable sector own at least one computer, in non-tradable sector only 61% do. There is also significant difference looking at the size of company. While approximately 95% of companies with 7 or more employees have at least one computer, just 64% of companies that have less than 7 employees do so too.

### Internet usage

We look just at the companies that own at least one computer (67% of all companies, 98% of companies from *Tradable* sector and 61% of companies from *Non-tradable* sector). All in all, of those that own a computer, 79% are connected to the internet, and about half of them have broad-band connection of some type (ADSL, cable or wireless). In *Tradable* sector, 93% of the companies have internet connection, and slightly more than half of them have some type of broad-band connection (ADSL, cable or wireless). As expected, all of the companies from *Tradable* sector that do business abroad have an internet connection, and over three quarters of them have broad-band connection of some type. On the other hand, just 70% of companies from *Non-tradable* sector (that own at least one computer) have internet connection (meaning that just 45% of total companies from *Non-tradable* sector have an internet connection). Of those *Non-tradable* companies that are connected to internet, slightly less than half have some type of broad-band connection. Again, there are significant differences when we look at the companies based on the number of employees. While 90% of all companies with 7 or more employees have an internet connection (and two thirds of them have a broad-band connection), this is true for just 49% of companies with less than 7 employees.

Companies that have at least one computer and have an internet connection were asked if they have web presentation. Of those companies, 30% have their own web presentation, which means that just 16% of all companies have their own web presentation. However, there is a big difference among sectors as just 11% of companies from *Non-tradable* sector have their own internet presentation, while this figure goes up to 40% for companies from *Tradable* sector. When we look just at the companies from *Tradable* sector that do business abroad, as much as 65% of them do have an internet presentation. It is interesting to note that 32% of companies from *Tradable* sector that do



business abroad use VoIP technology, while this holds for only about 5% of other companies.

## Educational structure of the workforce

As much as 43% of the managers and 22% of other employees in Belgrade services sector have tertiary education. There are profound differences when comparing different groups. In *Tradable* group 75% of managers and 52% of other employees have tertiary education, compared to 36% and 16% in *Non-tradable* group.

**Table 5:** Educational structure of the workforce

	% of workforce with tertiary education		Productivity index (total=100)
	Managers	Other employees	
Total	42,6	21,9	100,0
Non tradable	36,0	16,0	84,0
Tradable	75,0	51,8	161,0
ICT and engineering	80,0	43,0	165,0
Other	71,0	58,0	148,0

Educational structure of the workforce (especially managers) seems to be very important for high productivity. In *ICT and engineering* group, the group with highest productivity, 80% of managers and 43% of other employees have tertiary education.

As we expected, 81% of tertiary educated employees from *ICT and engineering* group obtained their degrees in technical sciences (mathematics, engineering, informatics, etc), while 58% of tertiary educated employees from group *Tradable, other* obtained their degrees in social sciences (economics, management, sociology, languages, etc).

## **Labor market and skill gaps**

It seems there are no apparent skill gaps in the labor market, contrary to what we expected. Most of the companies report that finding skilled staff is not a serious problem. This may be due to the fact that the average size of the surveyed companies is relatively small (4.4 employees) and companies of that size probably don't have needs for some sophisticated skills that we asked them about.

However, when we look at just the companies with seven or more employees it becomes apparent that some skills are lacking more than others. Topping the list are skilled and experienced managers, HR personnel and marketing experts. Also high on the list are experienced engineers with specialized technical skills and project managers. Companies report having less problems finding the employees with following skills: financial experts, lawyers experienced in business and procedural issues, advertising and public relations experts and programmers and database administrators.

When it comes to ways in which companies recruit new staff, more than 50% of them rely on recommendations, while only 11% of companies resort to job advertisements. But, companies with 7 or more employees and companies from *Tradable* group that do business abroad rely on job advertisements more often than the average (52% and 39% respectively). About 5% of these companies also use links with the University, while in other groups this is almost never the case.

## **Entrepreneurship and innovations**

When asked whether they plan any changes in their business, 28.6% of all companies replied positively, but in *Tradable* group as much as 52% of companies are planning changes in their business (Table 6). Asked about type of changes they have in mind, most of the companies point out

the plans to expand their business to additional activities apart from their primary activity or introduce new products and services. However, the need for organizational adjustments in *Tradable* sector is evident. It is in line with their strong growth; it seems that these fast growing companies have now expanded their business to the point where readjusting existing practices is needed.

**Table 6:** Plans for the future

	Planning changes in business, in %	Changes in organizational structure, in %	Nominal growth of GDP, in %, y-o-y
Total	28,6	13,7	23,8
Non tradable	24,0	8,0	22,6
Tradable	52,4	26,5	25,7
ICT and engineering	53,0	24,0	22,9
Other	52,0	28,0	30,2

There are also some other possible signs of relative immaturity. When asked where their investments are mostly focused, only a small number of companies responded that they center their efforts on market research, human resources and advertising. Most efforts are directed on introducing new products and rental, purchasing and renovation of premises and machinery.

Companies from *ICT and engineering* and *Tradable, Other* groups seem to be more innovative than others. 32% of them believe that they introduce innovations prior to the competition, compared to 25% from *Nontradable* group.

## 5. Conclusions

As Serbia recovers from international isolation and policy mismanagement of the previous period, rapid growth of services is filling the gaps in the country's services production. The growth of GDP and employment are very high across the sector. But in that significant growth we identify knowledge based services as the most promising and competitive part of the whole sector. In order to better understand knowledge based services, as well as the rest of the services sector, we conducted a survey of 359 privately owned companies<sup>5</sup> from Belgrade.

Our survey indicates that knowledge based services are already well established. Although *Tradable* group, comprised mostly of knowledge based services, is a relatively small group – 17.5% of all companies from the sector, it has a very significant share in GDP of Belgrade services sector – around 35%. Considering the evidence that over 30% of these companies already export their products, it seems that they found a way to reach the world, or at least the European, offshoring market.

Advances in information and communication technologies and continuous efforts in liberalization of international trade, combined with Serbia's brain drain, substantial human capital capacities and abundance of the cheap resources left unemployed after the tumultuous 90's, created a unique mix which opened up the door for this sprouting international expansion. Although current exports of services are still relatively low, sector growth rates suggest that this could change considerably.

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<sup>5</sup> Excluding financial sector and very large companies with diverse activities

The survey indicates that the potential in the *Tradable* sector for sustained high growth and its extension to the international arena is significant. However, our research identified some weaknesses as well. Companies still don't see information as the most valuable resource. Administrative barriers top the list of the problems when doing business with companies abroad. Government lacks clear strategy and companies perceive it as creating more problems than facilitating their growth with its policies.

This study is a pioneering effort to understand the services sector in Belgrade, and in Serbia as a whole. It provides valuable insight into the significant developments that have been thus far neglected and for the first time provides quantifiable measures of this emerging sector. However, the present study is but a first step, establishing that there is a need for further research to answer important questions arising from the results obtained.