

## Knowledge-Intensive Services in Slovakia from the Viewpoint of Innovation and Labour Productivity<sup>1</sup>

Dorota Lattová<sup>2</sup>

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### **Abstract**

*The article deals with current issues of innovation and labour productivity in knowledge-intensive services in Slovakia compared to less knowledge-intensive services. The aim of the article is to identify innovation activity of enterprises in selected branches of service sector as one of the key factors affecting labour productivity which influences competitiveness of individual enterprises as well as competitiveness of the national economy as a whole.*

### **Key words**

*Innovation, knowledge-intensive services, labour productivity*

**JEL Classification:** O49

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### **Introduction**

Innovations, an important source of economic growth potential, represent a significant factor affecting the development of business entities and are becoming one of the main drivers of today's advanced economies of the world. They ensure the transfer of the latest knowledge into practice, contribute to increases in customer perceived value of production, help to rationalize production processes and thus they also conduce to labour productivity growth. According to the Minerva 2.0 agenda (Ministry of Finance of the Slovak Republic, 2011, p. 4), it is the productivity growth based on innovation that leads to long-term competitiveness. The level of productivity determines the rate of return on investments into the national economy, and thus more competitive economies are able to produce higher level of incomes for their citizens (Gregor & Mičieta, 2010, p. 13). Low productivity, by contrast, is a sign of wasting resources, that can lead to gradual loss of competitiveness and thus to reduction of business activities (Rievajová et al., 2006, p. 247). Increasing the labour productivity should therefore be a part of strategic objectives of all economic entities whose concern is not just sustaining their market position but also achieving growth and prosperity. It holds true for the Slovak economy as well, that only by strategic support and investment in education, science, research, information and communication technologies and innovations, i.e. by creating conditions for the development of so-called knowl-

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<sup>2</sup> Ing. Dorota Lattová; The University of Economics in Bratislava, Faculty of Commerce, Department of Services and Tourism, Dolnozemska cesta 1, 852 35 Bratislava; E-mail: dorota.lattova@gmail.com

edge economy<sup>3</sup>, it is possible to accomplish a *vision of Slovakia, that is, at home as well as abroad, known as a synonym for a country with blossoming science and technology, exceptionally educated and creative people, which produces innovative goods and services of excellent quality* (Minerva, 2005).

Based on the above, the aim of the article is the identification of innovation activity and achieved labour productivity of enterprises in selected branches of the service sector in Slovakia, with an emphasis on knowledge-intensive service enterprises. In fact, according to their specific characteristics, knowledge-intensive services are the ones, that are a key source of creation and diffusion of knowledge or innovations, with an impact on their own competitiveness, competitiveness of other enterprises, individual branches of services and other economic sectors as well as on competitiveness of the national economy as a whole.

## **1 Representation and Innovation Activity of Knowledge-Intensive Services in the Economy of the Slovak Republic**

According to The Dictionary of knowledge economy (Sivák et al., 2011, p. 308), knowledge-intensive services<sup>4</sup> constitute a bridge between the manufacturing sector and the service sector. They are characterized by the application of a high degree of knowledge intent on solving the problems of clients by employees with higher qualification and higher levels of education and professional training (researchers, engineers and experts from all fields of science – technical, natural, social). The growth of knowledge-intensive services' importance is closely correlated with changes in sectoral structure of advanced economies, therefore the Slovak economy as well, that are concomitant of modern knowledge economies development. Despite this fact, the results of the statistical survey on innovation activity of enterprises in the Slovak Republic in 2006-2008 (Statistical Office of the Slovak Republic, 2010a) show, that in terms of the

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<sup>3</sup> Since the 90's of 20th century, the term *knowledge economy* is used to indicate such level of mixed market economies development, that is associated with development of branches of information and communication technologies and with growth of their impact in all spheres of economic activity. A knowledge economy emphasizes the importance of human potential development, it expresses and evaluates all qualitative changes of the society development – economic advancement, social coherence, quality of life and ecological sustainability. Basically, it reflects an advance from techno-physical factors profiling information society to factors based on knowledge and human capital (Sivák et al., 2011, p. 410).

<sup>4</sup> A group of knowledge-intensive services includes: Knowledge-intensive high-tech services 59–63 Motion picture, video and television programme production, sound recording and music publishing activities; Programming and broadcasting activities; Telecommunications; Computer programming, consultancy and related activities; Information service activities; 72 Scientific research and development; Knowledge-intensive market services (excluding high-tech and financial services) 50 Water transport; 51 Air transport; 69-71 Legal and accounting activities; Activities of head offices; Management consultancy activities; Architectural and engineering activities; Technical testing and analysis; 73–74 Advertising and market research; Other professional, scientific and technical activities; 78 Employment activities; 80 Security and investigation activities; Knowledge-intensive financial services 64–66 Financial service activities, except insurance and pension funding; Insurance, reinsurance and pension funding, except compulsory social security; Activities auxiliary to financial services and insurance activities; Other knowledge-intensive services 58 Publishing activities; 75 Veterinary activities; 84 Public administration and defence; Compulsory social security; 85–93 Education; Human health activities; Residential care activities; Social work activities without accommodation; Creative, arts and entertainment activities; Libraries, archives, museums and other cultural activities; Gambling and betting activities; Sports activities and amusement and recreation activities (Statistical Office of the Slovak Republic, 2010a, p. 5).

number of enterprises, less knowledge-intensive services<sup>5</sup>, constituting a 75.8 % share of the total number of service sector enterprises, hold a substantially dominant role in the service sector structure. Enterprises belonging to the group of knowledge-intensive services constitute only a 24.2 % share of total number of service sector enterprises.

**Table 1** Service enterprises in Slovakia broken down into knowledge-intensive and less knowledge-intensive, 2008

<b>SK NACE Rev. 2</b>	<b>Number of enterprises</b>	
<b>46-72 SERVICES</b>	4 637	<b>100 %</b>
<b>Knowledge-intensive services</b>	1122	<b>24.2 %</b>
<b>Less knowledge-intensive services</b>	3515	<b>75.8 %</b>

Source: Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic, p. 57-58.

*Note: The survey on innovation activity of enterprises in the Slovak Republic in 2006-2008 was carried out in 3 239 reporting units, the sample corresponds to the 26.6 % of the target population. The results are based on answers of 2 296 respondents, i.e. the response rate was 70.9 % counted from filled in questionnaires. The presented data are weighted figures, grossed-up for the whole target population of 11 761 enterprises. The results are rounded figures. Because of this reason there might appear slight differences between the given aggregation and the sum of figures by their structure. Within the service sector, the survey covered all enterprises with main economic activity in these following branches: 46 Wholesale trade, except of motor vehicles and motorcycles; 49 – 53 Transportation and storage; 58 Publishing activities; 61 Telecommunications; 62 Computer programming, consultancy and related activities; 63 Information services activities; 64 – 66 Financial and insurance activities; 71 Architectural and engineering activities; technical testing and analysis; 72 Scientific research and development. (Statistical Office of the Slovak Republic, 2010a, p. 1-2)*

In terms of innovation activities<sup>6</sup> of the service sector enterprises in Slovakia, the amount of non-innovative enterprises (64.9 %) prevail over the amount of enterprises with some innovation activity<sup>7</sup> (35.1 %). A strong predominance of enterprises without innovation activity (69.1 %) compared to enterprises with innovation activity (30.9 %) applies also to a group of less knowledge-intensive services separately. Contrary to less knowledge-intensive services, in case of knowledge-intensive services, the ratio between innovative and non-innovative enterprises is relatively balanced, enterprises

<sup>5</sup> A group of less knowledge-intensive services includes: Less knowledge-intensive market services 45–47 Wholesale and retail trade and repair of motor vehicles and motorcycles; Wholesale trade, except of motor vehicles and motorcycles; Retail trade, except of motor vehicles and motorcycles; 49 Land transport and transport via pipelines; 52 Warehousing and support activities for transportation; 55–56 Accommodation; Food and beverage service activities; 68 Real estate activities; 77 Rental and leasing activities; 79 Travel agency, tour operator and other reservation service and related activities; 81 Services to buildings and landscape activities; 82 Office administrative, office support and other business support activities; 95 Repair of computers and personal and household goods; Other less knowledge-intensive services 53 Postal and courier activities; 94 Activities of membership organisations; 96 Other personal service activities; 97–99 Activities of households as employers of domestic personnel; Undifferentiated goods- and services-producing activities of private households for own use; Activities of extraterritorial organisations and bodies (Statistical Office of the Slovak Republic, 2010a, p. 5).

<sup>6</sup> *Innovation activities* include product innovations, process innovations, ongoing or abandoned innovation activities for product and process innovations (technological innovations), organisational innovations, marketing innovations (non-technological innovations) (Statistical Office of the Slovak Republic, 2010a, p. 2).

<sup>7</sup> *Enterprises with innovation activity* are those, that have had any kind of innovation activity: - introduced new or significantly improved products; - introduced new or significantly improved process; - ongoing or abandoned innovation activities for product and process innovations; - implemented new organisational method; - implemented new marketing concept or strategy (Statistical Office of the Slovak Republic, 2010a, p. 3).

with innovation activity constitute a 48.3 % share of all enterprises providing knowledge-intensive services, enterprises without innovation activity constitute a 51.9 % share of all enterprises providing knowledge-intensive services.

**Table 2** Innovation in services in Slovakia, 2006-2008

SK NACE Rev. 2	Number of all enterprises		Enterprises with innovation activity		Non-innovative enterprises	
<b>46-72 SERVICES</b>	4 637	<b>100 %</b>	1 628	<b>35.1 %</b>	3 011	<b>64.9 %</b>
<b>Knowledge-intensive services</b>	1122	<b>100 %</b>	542	<b>48.3 %</b>	582	<b>51.9 %</b>
<b>Less knowledge-intensive services</b>	3515	<b>100 %</b>	1086	<b>30.9 %</b>	2429	<b>69.1 %</b>

Source: Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic, p. 81-82.

A majority of 1 628 service providing enterprises, that implemented some innovation activity in a monitored period of time, belongs to the group of enterprises with only non-technological innovation (52.4 %). It means these enterprises implemented an organisational and/or marketing innovation. An *organisational innovation* is the implementation of new or significant changes in the firm structure or management methods that are intended to improve the way the enterprise uses knowledge, to improve the quality of goods and services or the efficiency of work flows. Organisational innovations involve the implementation of a significant change in business practices, workplace organisation or external relations, intended to improve the firm's innovative capacity or performance characteristics, such as the quality or efficiency of work flows. Organisational innovations usually involve changes to more than one part of the firm's supply chain and are less technology dependant than process innovations. A *marketing innovation* is defined as the implementation of new or significantly improved designs or sales methods to increase the appeal of goods and services or to enter new markets. This category of innovations covers significant changes in how the enterprise markets its goods and services, including changes to design and packaging (Statistical Office of the Slovak Republic, 2010a, p. 3).

On the other hand, the group of service sector enterprises with only technological innovation comprises a 14.3 % share of all service sector enterprises with innovation activity. Technological innovations include product and process innovations. *Product innovation* is a product (good, service), which is new or significantly improved with respect to its fundamental characteristics, technical specifications, incorporated software or other materials and components, intended uses, user acceptability (accessibility) or other functional characteristics. Changes of solely aesthetic nature as well as pure sale of product innovations wholly developed and produced by other enterprises are not a kind of product innovation. A *process innovation* includes new or significantly improved production methods or supply and distribution systems. These may involve significant changes of specific techniques, equipment or software designed to improve quality, efficiency or flexibility of production or supply activities, or to reduce environmental threats or safety risks. Solely organisational and managerial changes do not fall into this category of innovations (Statistical Office of the Slovak Republic, 2010a, p. 2-

3). Approximately the same ratio between the number of enterprises with only technological innovation and the number of enterprises with only non-technological innovation typical for the service sector as a whole, applies also separately to the group of enterprises belonging to knowledge-intensive branches of services as well as to the group of enterprises belonging to less knowledge-intensive branches of services. Therefore, in terms of the nature of innovation activities, knowledge-intensive services are not significantly different from less knowledge-intensive services. After all, for services, the predominance of non-technological innovations over the technological ones is typical, regardless of the knowledge use intensity. This predominance of non-technological innovations results from the service specific characteristics – intangibility, inseparability, variability, dispensability and specific ownership.

**Table 3** Service sector enterprises in Slovakia by the type of innovation activity, 2006-2008

SK NACE Rev. 2	Total number of enterprises with innovation activity		Enterprises with only non-technological innovation		Enterprises with only technological innovation		Enterprises with non-technological and technological innovation	
<b>46-72 SERVICES</b>	1 628	<b>100 %</b>	853	<b>52.4 %</b>	232	<b>14.3 %</b>	544	<b>33.4 %</b>
<b>Knowledge-intensive services</b>	542	<b>100 %</b>	297	<b>54.8 %</b>	76	<b>14.0 %</b>	167	<b>30.8 %</b>
<b>Less knowledge-intensive services</b>	1086	<b>100 %</b>	555	<b>51.1 %</b>	155	<b>14.3 %</b>	377	<b>34.7 %</b>

*Source:* Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic, p. 81-82.

Apart from the nature of implemented innovation activities, the enterprises of knowledge-intensive services compared to the enterprises of less knowledge-intensive services can be characterized as enterprises with a stronger innovation activity. However, efforts to implement innovation activities by knowledge-intensive as well as by less knowledge-intensive service providers, encounter with many barriers to innovation. According to the data from the survey on innovation activity of enterprises in the Slovak Republic in 2006-2008 (Statistical Office of the Slovak Republic, 2010a, p. 141-142), the most important barrier for both observed groups of service enterprises without innovation activity in Slovakia is the barrier of prohibitive innovation costs. At the same time, the second most frequently cited barrier to innovation activities is the lack of funds within the enterprise or enterprise group. Although, in some cases, it is possible to compensate barriers related to costs of innovation activities by public financial support, only a 10.3 % share of knowledge-intensive service enterprises with technological innovation and a 11.1 % share of less knowledge-intensive service enterprises with technological innovation received this kind of financial support in the monitored period of time.

**Table 4** Enterprises with technological innovation in Slovakia which received public funding from one or more sources, 2006-2008

	TOTAL	From local or regional authorities	From central government	From the European Union	From the 6 <sup>th</sup> or 7 <sup>th</sup> Framework Programme
<b>Knowledge-intensive services</b>	25	5	16	6	3
% share of total number of knowledge-intensive service enterprises with technological innovation	10.3 %	2.1 %	6.6 %	2.5 %	1.2 %
<b>Less knowledge-intensive services</b>	59	1	14	44	0
% share of total number of less knowledge-intensive service enterprises with technological innovation	11.1 %	0.2 %	2.6 %	8.3 %	0.0 %

Source: Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic, p. 105-106.

Therefore, increasing the amount of funds for public financial support to innovation activities of enterprises on the one hand, or intensifying the interest and effort to obtain such support by enterprises themselves on the other one, seems to be a challenge for the future. Its utilization will undoubtedly contribute to overcoming some innovation barriers and consequently to increases in the intensity of innovation activities in the service sector in Slovakia and their positive effects reflected e.g. in improvement of labour productivity.

## 2 Labour Productivity in Services by Innovation Activity and Knowledge Intensity

Productivity is an economic category expressing the ratio of output generated by system to inputs needed for production of this output. Productivity is a measure of transformation process efficiency, a major component of economic growth and an important element of competitiveness (Gregor & Mičieta, 2010, p. 28-32). It reflects the effectiveness of human work by the amount of utility values produced per unit of time, or per employee. A generic ratio for calculating the labour productivity ( $P_L$ ) can be formulated as (Hitka, 2003, p. 4):

$$P_L = \frac{Q}{T}$$

or

$$P_L = \frac{Q}{P}$$

or

$$P_L = \frac{\text{output}}{\text{input}}$$

where:

Q – the amount of production (brutto, netto) defined by natural, labour or value indicators

T – the time usage (year, month, day, hour)

P – the number of employees

*Note: In this paper, the labour productivity of service sector enterprises is calculated on the basis of the Statistical Office of the Slovak Republic data as a turnover per employee ratio.*

Enterprises whose productivity grows faster than the industry average productivity, ensure themselves good conditions for a dynamic growth. On the other hand, enterprises whose productivity is lower than the industry average productivity loose customers because they are not able to compete on prices (Rievajová et al., 2006, p. 248). According to calculations of labour productivity on the basis of data from the statistical survey on innovation activity of enterprises in the Slovak Republic in 2006-2008 (Statistical Office of the Slovak Republic, 2010a), knowledge-intensive services can be characterized by higher labour productivity (153.7 thous. EUR of turnover per employee) than less knowledge-intensive services (137.0 thous. EUR of turnover per employee). At the same time, it applies for knowledge-intensive services, that in spite of the fact that in many observed branches (*50 Water transport; 58 Publishing activities; 64 Financial services except insurance and pension security; 65 Insurance, reinsurance and pension funding, except compulsory social security and 72 Scientific research and development*) the enterprises with innovation activity are less productive than the enterprises without innovation activity, the aggregated value of the labour productivity indicator is higher in case of enterprises with innovation activity compared to non-innovative enterprises. That means, in comparison to the enterprises without innovation activity, a greater volume of attained turnover per employee within knowledge-intensive services is related to the innovative enterprises. On the other hand, in case of less knowledge-intensive services, enterprises without innovation activity are paradoxically those more productive. This applies for all the observed branches of less knowledge-intensive services, except of *46 Wholesale trade except motor vehicles and motorcycles*, as well as for an aggregate indicator calculated for the group of branches as a whole.

**Table 5** Labour productivity in services in Slovakia, in thous. EUR of turnover per employee, 2008

	<b>Total number of enterprises</b>	<b>Enterprises with innovation activity</b>	<b>Enterprises without innovation activity</b>
<b>46-72 SERVICES</b>	<b>142.4</b>	<b>134.4</b>	<b>156.8</b>
<b>KNOWLEDGE-INTENSIVE SERVICES</b>	153.7	173.1	104.6
50 Water transport	61.9	59.8	74.4
51 Air transport	318.0	378.1	305.1
58 Publishing activities	103.8	68.9	127.0
61 Telecommunications	252.2	257.5	130.9
62 Computer programming, consultancy and related activities	58.8	62.9	52.9

63 Information service activities	58.2	76.6	46.7
64 Financial service activities, except insurance and pension funding	210.5	204.7	276.7
65 Insurance, reinsurance and pension funding, except compulsory social security	277.0	266.1	396.9
66 Activities auxiliary to financial services and insurance activities	106.1	161.3	84.8
71 Architectural and engineering activities; technical testing and analysis	55.6	56.4	54.8
72 Scientific research and development	45.0	40.5	56.0
<b>LESS KNOWLEDGE-INTENSIVE SERVICES</b>	<b>137.0</b>	<b>112.1</b>	<b>174.9</b>
46 Wholesale trade, except of motor vehicles and motorcycles	253.0	287.8	230.5
49 Land transport and transport via pipelines	63.1	62.0	65.9
52 Warehousing and support activities for transportation	54.2	39.9	89.1
53 Postal and courier activities	27.1	22.4	139.6

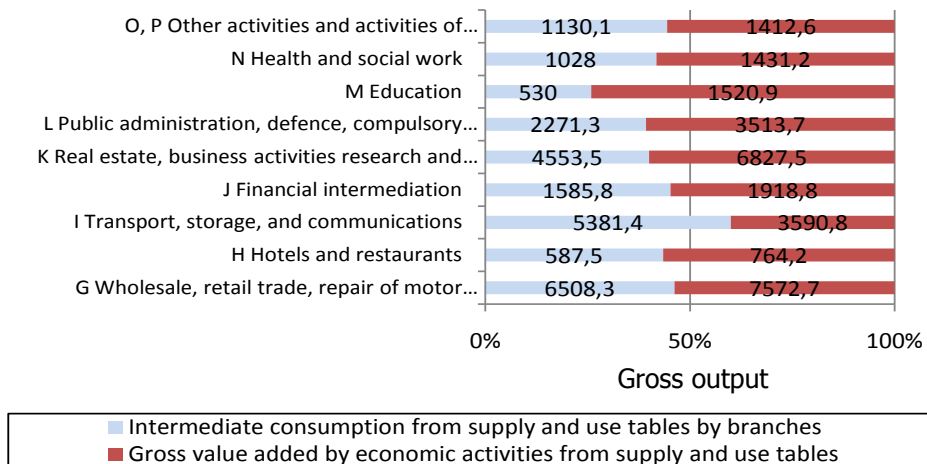
Source: Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic, p. 73-78.

However, due to some limiting aspects of the analysis, these facts about a positive impact of innovation activities and intensity of knowledge utilisation on labour productivity can not be considered as wholly objective. The value of labour productivity as a ratio of turnover to the number of employees namely does not have a sufficient explanatory ability, as it does not indicate the added value per employee, but includes also the value of intermediate consumption<sup>8</sup>. However, the rate of intermediate consumption and the rate of value added vary across particular branches of services. As shown in Figure 1, according to the latest data provided by the Statistical Office of the Slovak Republic (2010b), the highest percentage share of intermediate consumption and the lowest percentage share of gross value added in the total value of gross output, is reported by enterprises of *I Transport, storage and telecommunications*; whereas the lowest percentage share of intermediate consumption and the highest percentage share of gross value added in total value of gross output, is reported by organisations of *M Education*.

<sup>8</sup> *Intermediate consumption* consists of services and goods of a short-term use which have been consumed or transformed by the production process within the accounting period. *Value added* is a balancing item and is calculated by a subtraction of intermediate consumption from production of individual sectors or branches. (Statistical Office of the Slovak Republic, 2010b, p. 235)



**Figure 1** Percentage breakdown of gross output into intermediate consumption and gross value added, service sector in the Slovak Republic, in mill. EUR, at current prices, 2006



Source: Processed on the basis of data provided by the Statistical Office of the Slovak Republic. (2010b). *Statistical yearbook of the Slovak Republic 2010*. Bratislava: VEDA, Publishing House of the Slovak Academy of Sciences, p. 282 – 287.

Different values of the intermediate consumption rate and the rate of value added in particular service branches cause an uneven modification of the labour productivity indicator in services calculated as a ratio of attained turnover per employee. Thus, the lack of a database of intermediate consumption values and indicators of gross value added for enterprises with innovation activity and enterprises without innovation activity forms a weak point of the analysis, the elimination of which is conditional on realization a further extensive research.

## Conclusion

For the growth and prosperity of the Slovak economy, the orientation of entrepreneurial efforts and public policy instruments to support innovation activities in services and particularly in knowledge-intensive services is inevitable. The implementation of innovation in enterprises generates a competitive advantage and tends to have a positive impact on labour productivity growth and successive strengthening of corporate, sectoral and nationwide competitiveness. In the Slovak Republic, knowledge-intensive services compared to less knowledge-intensive services are characterized by greater innovation activity. This fact is positively reflected also in the achieved labour productivity measured as a ratio of turnover per employee. In case of knowledge-intensive service enterprises, the volume of turnover per employee is higher than in less knowledge-intensive service enterprises. An even more evident difference in the value of the labor productivity indicator between knowledge-intensive and less knowledge-intensive services can be observed by comparing enterprises with innovation ac-

tivity. Also in this case, a greater volume of turnover falls on an employee in knowledge-intensive services in comparison to less knowledge-intensive services. A limiting aspect of the labor productivity analysis within services in Slovakia is the lack of relevant data needed for objective assessment of benefits of innovation activities on labour productivity growth. In this context, an absent indicator is primarily the rate of value added for enterprises with innovation activity and enterprises without innovation activity in particular fields of services, i.e. the subtraction of intermediate consumption from gross output of particular branches. Nevertheless, it can be said for sure, that knowledge-intensive services significantly contribute to the innovation performance of the Slovak Republic as well as to the building up of a modern knowledge economy, and therefore this economic subsector should preferentially be financially supported also by public institutions. Paradoxically, the share of enterprises with technological innovation within knowledge-intensive branches of services, which received some public funding in 2008, is lower than the share of enterprises with technological innovation within less knowledge-intensive services. Therefore, the challenge for the area of public financial support for innovation is the effective channeling of funds to those branches that are strategically most significant for the Slovak economy, or the enhancement of an interest in public financial support for innovative activities by enterprises themselves.

## References

- Gregor, M. & Mičieta, B. (2010). *Produktivita a inovácie*. Žilina: The Slovak Productivity Center.
- Hitka, M. (2003). *Základy personálnej práce: Príklady z časových a pohybových štúdií*. Zvolen: Technical University in Zvolen.
- Minerva. (2005). *Vízia*. Retrieved August 3, 2011, from <http://www.iminerva.sk/default.aspx?ami=1100&smi=1110>.
- Ministry of Finance of the Slovak Republic. (2011). *Minerva 2.0: Slovensko do prvej ligy*. Retrieved August 3, 2011, from <http://www.finance.gov.sk/Default.aspx?CatID=84&NewsId=444>.
- Rievajová, E. et al. (2006). *Teória a politika zamestnanosti* (1st ed.). Bratislava: Publishing House EKONÓM.
- Sivák, R. et al. (2011). *Slovník znalostnej ekonomiky* (1st ed.). Bratislava: Sprint dva.
- Statistical Office of the Slovak Republic. (2010a). *Innovation activity of enterprises in the Slovak Republic 2006-2008*. Bratislava: Statistical Office of the Slovak Republic. Retrieved August 3, 2011, from <http://portal.statistics.sk/files/inovacna-aktivita-podnikov-sr-2006-8.pdf>.
- Statistical Office of the Slovak Republic. (2010b). *Statistical yearbook of the Slovak Republic*. Bratislava: VEDA, Publishing House of the Slovak Academy of Sciences.