

# Economics and Business Review

Volume 6 (20) Number 4 2020

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Paper based publication

**ISSN 2392-1641**  
**e-ISSN 2450-0097**

POZNAŃ UNIVERSITY OF ECONOMICS AND BUSINESS PRESS  
ul. Powstańców Wielkopolskich 16, 61-895 Poznań, Poland  
phone +48 61 854 31 54, +48 61 854 31 55  
www.wydawnictwo.ue.poznan.pl, e-mail: wydawnictwo@ue.poznan.pl  
postal address: al. Niepodległości 10, 61-875 Poznań, Poland

Printed and bound in Poland by:  
Poznań University of Economics and Business Print Shop

Circulation: 215 copies



## Efficiency of services in CEE countries—case study of Poland and Belarus<sup>1</sup>

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**Abstract:** The aim of the paper is to identify determinants of the efficiency of service companies from two Central and Eastern European (CEE) countries<sup>4</sup>—Poland and Belarus. These transition economies represent different economic and systemic conditions. That is why it is worth analyzing whether external conditions determine internal efficiency factors in service companies. In order to achieve that aim quantitative research was conducted among 305 Polish and Belarusian service enterprises. The research results presented significant differences in responses between the two countries. For Polish enterprises the main determinants of efficiency were above all connected with competent and skilled staff. Belarussian companies regarded as efficiency factors which determine the demand level by means of access toward foreign markets and possibilities of internationalization. It proves that CEECs are not homogeneous and they represent different levels of economic development as well as the different conditions of running a business.

**Keywords:** efficiency, efficiency factors, services, service companies, CEE countries.

**JEL codes:** D04, D22, F41, L84.

### Introduction

In recent years the service sector has increasingly affected economies in terms of both employment and added value (Durst, Mention, & Poutanen, 2015). Despite being widely recognized as an engine of growth and competitiveness

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<sup>1</sup> Article received 3 May 2020, accepted 7 December 2020.

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<sup>4</sup> The CEE countries include Russia, Estonia, Latvia, Lithuania, Belarus, Ukraine, Poland, Czech Republic, Slovakia, Moldova, Hungary, Romania, Bulgaria, Slovenia, Croatia, Bosnia, Montenegro, Serbia, Albania, Kosovo, Macedonia (Gonçalves, 2016, p. 44).

service industries remain under-investigated for their actual efficiency and their determinants. This occurs especially in relation to the countries of Central and Eastern Europe where the services' sector is regarded as significantly important but still underdeveloped (Vidovic, 2002, p. 5). On the other hand the outstanding growth of service industry has been the main feature of structural change in CEE countries in the twentieth century (Vidovic, 2002, p. 13). The lack of relevant science- and research-oriented interest does not result from the small importance or significance of the issue, but rather from restricted access to data on the subject.

The paper aims to identify the determinants of efficiency of service companies from two CEE countries—Poland and Belarus, both of which are currently facing diversified macroeconomic conditions and developing system solutions. At the same time the service sector is very important for both economies. Following the data of National Statistical Offices in Belarus in 2016 the share of services in GDP was 56.1% and at the same time in Poland—64.2%. In both countries an upward trend of that indicator has been observed.

The article is divided into three main sections. The first section presents the theoretical basis and provides an overview of the issue of service efficiency. The second section describes a methodology of the study of two groups of Polish and Belarusian enterprises. The third section contains the results of research on the most important factors that influence the efficiency of service provision according to Polish and Belarusian respondents. In the last section of the paper conclusions are presented.

## **1. Literature review**

Service efficiency and its related factors have gained considerable significance in the service sector in recent decades. In this regard considerable research on the productivity and efficiency of service companies was based on the assumption that the service sector did not have the same potential for using technological progress as capital-consuming production sectors. It concerns banks, insurance companies, hotels (Berger, Hunter, & Timme, 1993, pp. 221–249; Jarraya & Bouri, 2014, pp. 69–81; Assaf & Josiassen, 2016, pp. 612–627). Despite transformations of modern economies into market economies with post-industrial features, the service sectors in individual countries of the Commonwealth of Independent States are still being treated marginally. Taking into account the areas of the analyzed countries the development of services mainly concerns transportation, communication and trade (Skąpska, 2016, p. 73). In the previous century the functions of services were concerned with adjusting capital and adapting technology to local conditions. Presently the globalization of trade and capital markets has forced business entities to extend the range of service functions into the international sphere and to introduce the change of eco-

conomic rules. In the long-existing capitalist economies consolidation of services has caused a lower pace of the growth of the sector share. However the transformed economies and their market-oriented performance became a source of dynamic changes in order to meet globally accepted standards (Gnusowski, Goncharuk, Skąpska, & Domakur, 2017, p. 21).

A high degree of internationalization of the main European service providers allows for the transference of improvements in efficiency to other countries. However it does not mean that such efficiency is homogeneous outside the country borders. The efficiency stemming from service diversification depends significantly on variables specific to a given country (Roche & Sellers-Rubio, 2019). Reaching macroeconomic effectiveness is connected with goals achieved by wealthy countries (high level of efficiency, fast pace of economic development), which should be in accordance with the microeconomic goals, e.g. providing a proper division of resources (Barr, 2012, p. 7).

No matter in which direction the evolution and the development of economics goes, as well as how the theory of organization progresses, the general concept may be considered to be timeless. Research concerning efficiency in the theory of economics mainly considers an optimized allocation of resources. Researchers point out the significance of the efficiency of internal processes in an organization which determine a value added for customers (Sujová, Marcineková, & Simanová, 2019, pp. 119–129).

Pareto performed some in-depth research. According to him efficiency occurs when it is impossible to organize production in a manner that improves one's position without deteriorating someone else's standing. Subsequently Nobel Prize winners, Kompaneets and Debreu, brought Pareto's elaboration to the level of single production units. Kompaneets claimed that a single production system is only efficient if an increase of any result or decrease of any expenditure is possible by means of decreasing the other result or increasing the other expenditure (Daraio & Simar, 2007, p. 7). North believed that the efficiency criterion in the new institutional economics (NEI) is adaptive efficiency expressed in the flexibility of the institutional structure in the creation of such forms of social cooperation, which leads to a reduction in transaction costs and an increase in productivity (North, 2005, pp. 69–70).

The concept of "efficiency" can be divided into three main groups (Rollnik-Sadowska, 2019, p. 19). The first involves understanding efficiency as resource allocation in the Pareto sense. The second group of definitions includes perceiving efficiency as a relationship between results (output) and expenditures (input). The third indicates adaptive possibilities which testify to achieving efficiency. The notion of efficiency is assumed within the framework of the second group, i.e. as a relationship between output and input.

Steers made one of the first attempts to indicate criteria which determine the essence of organizational efficiency. His model covered the following criteria: adaptation / flexibility, productivity, employee satisfaction, profitability, rare

resource disposition, elimination of internal frictions, system transformation, development, technical efficiency, staff stability, growth, internal integration, openness in communication, survival (Steers, 1975, p. 549). According to the subsequent studies of Caves and Barton (1990) as well as Caves (1992) four groups of determinants of efficiency in the business sector can be identified. The first group includes factors external to the enterprise, such as the degree of competition existing in the markets in which it operates. The second is the characteristics of the company itself such as size, type of organization, greater or lesser intensity of investment and the advantages of the company's location. The third group of determinants contains dynamic disturbances or deviations from the firm's long-term equilibrium situation. These disturbances may be a consequence of the evolution of demand faced by the company or a consequence of its particular production strategies, such as the degree of technical innovation. The last group concerns public versus private ownership of the enterprise. The degree of public intervention in the management of companies can affect the degree of efficiency in the use of productive factors. However it can be noticed that certain research fields concerning services and service efficiency are insufficient, cursory or even rarely examined.

Measuring the efficiency of services is a complicated process due to their unique characteristics (intangibility: services are non-physical, heterogeneity: services are customized, inseparability: services are produced and consumed simultaneously, perishability: services cannot be stored) (Sandeep, 2011, pp. 313–324). Currently the service sector has undergone changes in its characteristics as a result of dissemination of new technologies which cause inseparability of production and consumption as well as the perishability of services, which can often be overcome by means of technology-based communications (Moeller, 2010, pp. 359–368). This may lead to the simplification of the process of measuring service efficiency as well as research and analysis in that field.

Due to advancements in digital technologies companies are under pressure to increase their efficiency and productivity, especially on 'mature' markets. Their survival depends on their capabilities to improve their results in the context of growing competition and a globalized market. Efficiency as a business concept should help companies to administer their economic profit (Grönroos & Ojasalo, 2015, pp. 296–311), and it also concerns branches outside the service sector.

Efficiency has a quantifiable nature, particularly in production enterprises, and is easily influenced by economic factors. On the other hand services function in the area of economic activity where many non-economic factors affecting business exist. With regard to services the derivative of achieving efficiency by a service provider is the rationality of administering it in economic practice. Factors of service efficiency diversify the engagement level of a human factor in the process of administering/managing (Skąpska, 2019, p. 139).

Besides in order to understand productivity in service companies as well as in managing profits it is not possible to separate costs and income effects of

changes in the production system (Grönroos & Ojasalo, 2015). This poses an even greater challenge in preparing that kind of analysis. Simar and Wilson (2007) proposed a simultaneous estimation of efficiency and its determining factors by means of a stochastic two-sided process.

The first stage is aimed at evaluating efficiency with the use of a nonparametric DEA technique. The second stage applies a regression model in order to explain the influence of environment variables on the efficiency estimation. The service sector does not have the same potential for using technological changes as capital-consuming production sectors. Thus increased efficiency and effectiveness in the service sector may be difficult to obtain. In reality Van Biema and Greenwald (1997) stressed that productivity does not grow in service areas of a production sector. Services are created with excessive resources and generate unnecessarily high costs. The survey of the efficiency in frequent-contact services proved difficult to a great extent because production and sales occur at the same time and service provision is not homogeneous. As service companies are exposed to substantial uncertainty and risk they are particularly focused on finding ways to rationalize costs and increase efficiency (Skąpska, Rollnik-Sadowska, & Kunicka, 2017).

This article draws attention to the difference in the influence exerted by various factors with regard to economic entities in two selected CEE countries—Poland and Belarus. Those transition countries represent different economic and systemic conditions. That is why it is worth analyzing whether external conditions determine internal efficiency factors in services companies. Moreover the research on Belarusian economy is scarce.

Poland has undergone a process of economic transformation from central to market economy after the collapse of the previous regime. The transformation was followed by EU integration, which turned out to be a strong incentive for economic convergence with Western European countries, and it was later accompanied by political integration, liberalization of markets, trade integration, financial integration and attraction of FDI and foreign savings (Makrevska Disoska, 2016).

At the same time, Belarus—previously an agricultural country—implemented industrialization and is currently dominated by industry and the service sectors (Sergi, 2020). However this economy is characterized by authoritarian management and its economic relations are strongly linked with Russia (Hrechyshkina & Samakhavets, 2019, pp. 47–55). Since the late 1990s the Belarusian economy has been characterized by rigid government regulation of the economic process as well as governance controls over the activity of SMEs in the country. Belarus is currently characterized by difficulties in establishing and running enterprises, tight bureaucratic control and slow business dynamics (Abraham, Bilan, Krauchenia, & Strielkowski, 2015).

The results of secondary studies prove that Poland is a more developed economy than Belarus with relatively stable economic indicators. A taxonomic analy-

sis conducted by Reiff and Tokar among selected post-communist countries for the period 2010–2014 indicated that, out of three clusters, Belarus was included in the second group and Poland in the third cluster with the best indicators (Reiff & Tokar, 2016, pp. 14–15). The indicators analysed were GDP per capita, GDP per capita growth, inflation, gross capital formation, FDI, agriculture value added, industry value added, total natural resources, rental and service value added. The position of Belarus was particularly burdened by high inflation.

Moreover these countries present a different approach to business efficiency. In Poland it is based on a microeconomic approach by means of which the efficiency of the company is discussed in the context of competition against all other companies (Mihályi, 2017, p. 102). Belarus is more focused on state efficiency in terms of its efficient use of natural resources.

## 2. Methodology

The research methodology covers the main research objective of the paper—identifying determinants of the efficiency of service companies from two Central and Eastern European countries—Poland and Belarus. To obtain the main objective a quantitative primary research was conducted based on a mixed mode procedure (Rollnik-Sadowska, 2019, p. 65) using CAWI and PAPI techniques. It covered Polish and Belarusian service enterprises that operated in the private sector of finance, construction, trade and education. A total 305 service providers were contacted with the questionnaires.<sup>5</sup> 157 respondents represented Poland, 148—Belarus.

The nonprobability sampling technique—purposive sampling—was used. The purposive sampling technique, also called judgment sampling, is the deliberate choice of a participant due to the qualities a given participant possesses (Etikan, Musa, & Alkassim, 2016). In the scope of this research, the qualities of

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<sup>5</sup> Section I of the questionnaire. Effectiveness factors in providing services by enterprises in the country. Question 1. What factors do you take into account when assessing the effectiveness of service delivery? Factors: resources of labour, capital (material and financial), land (raw materials); technologies owned; organization of work and working conditions; development of the company's human capital (increasing the level of knowledge, employee competences); maximizing the financial result; market position (sales volume of services, prestige); management method (democratic style, transactional style, etc.); Question 2. Which of the factors do you think have a positive impact on the efficiency of service delivery? Factors: high competences and skills of employees; access to new knowledge / knowledge transfer; appropriate location of the facility (e.g. in a place with high traffic); customer-oriented employees (with the right personality, empathy); the direct nature of the provision of services; indirect nature of the service (e.g. via the Internet); increased specialization; Investments aimed at reducing the labor intensity, i.e. the effort put into the creation of the service during a specific working time; service automation; relatively large number of regular customers. The complete questionnaire is included in the book: (Skąpska, 2019).



the participant were: the affiliation of entrepreneurs to one of the service sectors out of finance, construction, trade and education.

Both Polish and Belarusian companies were considered as populations in the knowledge that obtaining a response from the Belarusian side would be difficult due to socio-political reasons. Respondents provided their answers by means of an online survey as well as a direct survey. The selection of entrepreneurs from Poland and Belarus was intentional. The research was carried out in a scientific partnership within a joint Polish-Belarusian research project. The subject of the project required the cooperation of two 5-person research teams with coordinators on the Polish and the Belarusian side and it involved reaching an agreement on research questions and an ongoing discussion with regard to particular research stages.

The two countries significantly differ in terms of the functioning of their market services' sector and achieving the efficiency in service provision.

Research questions included the following: What efficiency factors in services have the greatest significance for Polish as well as for Belarusian enterprises? Questionnaires of identical content were filled in by the Polish and Belarusian business representatives. On the Belarusian side the coordination and research was done by was the professor in economics, and on the Polish side—doctor in economics.

The research was conducted within the framework of a Polish-Belarusian research project based on an agreement for scientific cooperation between the Polish Academy of Sciences and the National Academy of Sciences of Belarus No. 7—Project on the 'Efficiency of Services in Cross-border System of Poland and Belarus' in the years 2017–2019—application number BWZ/478/JL/16. The identification of efficiency factors in services was based on the Mann Whitney U test which showed significant features. In building data Statistica and Excel programs were of considerable use.

### **3. Results**

Poland and Belarus utilize two different systems of increasing their service efficiency. It mainly concerns a different development level of their market economies. That situation is reflected in various determinants of efficiency which were highlighted by Polish and Belarusian entrepreneurs.

Due to the fact that the survey of the same content was presented to Polish and Belarusian enterprises it was important to check significant variations in answers to the same questions. In order to achieve this goal the Mann-Whitney U test<sup>6</sup> (Table 1) was applied and, by contrast to a *t*-Student test, it was not so

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<sup>6</sup> Mann-Whitney U test should be used for random samples, therefore the final results presented in the study should be treated with caution.

**Table 1. Mann-Whitney U Test results with significant differences**

| Question   | Variable   | Mann-Whitney U Test<br>(with continuity correction), significant results are marked with<br>$p < 0.05000$ |                         |        |        |       |                         |       |
|--|--|---|-------------------------|--------|--------|-------|-------------------------|-------|
|  |  | sum<br>range<br>Poland  | sum<br>range<br>Belarus | U      | Z      | p     | with<br>correc-<br>tion | p     |
| What factors do you take into account while evaluating service efficiency?                 | own technology resources   | 6638.0  | 3658.0                  | 1688.0 | -2.141 | 0.032 | -2.252                  | 0.024 |
| What factors do you think affect service efficiency in a positive way?                     | high competence and skills of staff  | 7736.5  | 2703.5                  | 1713.5 | 2.108  | 0.035 | 2.845                   | 0.004 |
| What factors do you think affect service efficiency in a negative way?                     | access to new knowledge  | 7861.5  | 2578.5                  | 1588.5 | 2.650  | 0.008 | 2.880                   | 0.004 |
|  | lack of interest among foreign investors                                     | 6077.5  | 4075.5                  | 1226.5 | -4.098 | 0.000 | -4.205                  | 0.000 |
|  | possibility of international exchange  | 6233.0  | 3778.0                  | 1480.0 | -2.908 | 0.004 | -3.003                  | 0.003 |
| Which features of new-wave services, and to what extent, are contained in your enterprise? | high saturation with knowledge (high level of competence and qualifications) | 7542.0  | 2611.0                  | 1621.0 | 2.358  | 0.018 | 2.509                   | 0.012 |
|  | central and local governments affecting business economically                | 6559.0  | 3594.0                  | 1708.0 | -1.974 | 0.048 | -2.025                  | 0.043 |
| What innovations are you willing to introduce/going to introduce into your enterprise?     | expanding the range of services  | 7716.5  | 2579.5                  | 1589.5 | 2.572  | 0.010 | 2.703                   | 0.007 |
|  | creating 365/24 service  | 6100.0  | 3911.0                  | 1347.0 | -3.500 | 0.000 | -3.597                  | 0.000 |

|  |  |        |        |        |               |              |               |              |
|--|--|--------|--------|--------|---------------|--------------|---------------|--------------|
|  | sharing knowledge  | 7585.5 | 2710.5 | 1720.5 | <b>1.999</b>  | <b>0.046</b> | <b>2.147</b>  | <b>0.032</b> |
| What competence of the staff affects the development of services you provide?                  | staff engagement   | 8402.0 | 1894.0 | 904.0  | <b>5.570</b>  | <b>0.000</b> | <b>6.454</b>  | <b>0.000</b> |
|  | staff motivation   | 7863.0 | 2433.0 | 1443.0 | <b>3.213</b>  | <b>0.001</b> | <b>3.561</b>  | <b>0.000</b> |
|  | high level of customer focus (creating and maintaining relations, obtaining information) | 7836.0 | 2460.0 | 1470.0 | <b>3.095</b>  | <b>0.002</b> | <b>3.385</b>  | <b>0.001</b> |
| In what way do you assess staff performance in your company?                                   | staff performance evaluation (e.g. engagement, motivation, satisfaction)                 | 7615.5 | 2537.5 | 1547.5 | <b>2.682</b>  | <b>0.007</b> | <b>2.844</b>  | <b>0.004</b> |
| What factors from your nearest neighborhood may contribute to better cross-border cooperation? | access to resources (personnel, technology, machines, devices, etc.)                     | 5873.5 | 3579.5 | 1502.5 | <b>-2.503</b> | <b>0.012</b> | <b>-2.587</b> | <b>0.010</b> |
|  | building enterprise cooperation in order to provide comprehensive services               | 5916.5 | 3536.5 | 1545.5 | <b>-2.305</b> | <b>0.021</b> | <b>-2.406</b> | <b>0.016</b> |
| What factors from your farther neighborhood may contribute to better cross-border cooperation? | business expansion based on franchising, leasing, trading licenses and know-how          | 5926.0 | 3527.0 | 1555.0 | <b>-2.261</b> | <b>0.024</b> | <b>-2.354</b> | <b>0.019</b> |

Note: Test with continuity correction. Significant results are marked with  $p$ -value < 0.05.

Source: Own elaboration based on project research results.

rigorous in its requirements, which made it a very convenient way to measure data on nominal and ordinal scales. The test was applied to all questions. However Table 1 includes the results for the questions that generated significant differences between the two groups.

Among the above-mentioned variables one may distinguish those that were evaluated higher on the scale (they had greater influence and were more important, etc.) by the Polish enterprises than by the Belarusian ones and the other way around. The questions where the Polish enterprises assessed the variables higher on the 5-grade ordinal scale included the following aspects: high competence and skills of staff, access to new knowledge, high saturation with knowledge (high level of competence and qualifications), expanding the range of services, sharing knowledge, personnel engagement and motivation, high level of customer focus.

As for the questions where the Belarusian companies ranked the variables higher than the Polish companies, the list included: lack of interest among foreign investors (the significance of this variable is influenced by the fact that Belarus is characterized by a marginal market economy system and, consequently, a lack of openness of the economy to other economies outside Russia, the Arab Emirates or China. On the other hand the lack of interest of foreign investors is caused by other factors—strong dependence on the Russian Federation as an investor (80% of investments come from Russia), lack of political consent for privatization of large enterprises, lack of attractive conditions for investing capital in Belarus due to its unstable social and political situation. In Belarus wages are very low, trade unions are treated as a crime; the country lacks democracy and freedom to do business), possibility of international exchange, economic influence of central and local government, creating 365/24 service, access to resources, cooperation between enterprises in order to provide comprehensive services, business expansion based on franchising, leasing, trading licenses and know-how.

Even though the set of variables taken into account while evaluating the efficiency of services is almost constant, the variable influence is not. Entrepreneurs / managers who seek efficiency in their companies test all types of factors and assess them afterwards. Many of those factors have a destabilizing effect (Table 2). The biggest obstacles in running efficient service businesses in Poland and Belarus include the lack of demand for services and the high cost of their provision. Polish entrepreneurs considered the lack of suitable personnel as a significant problem (42%). The Belarusian side saw a significant barrier in the low system of motivation which is mainly connected with low remuneration (47.7% of those surveyed).

Service providers strive towards positive effects and select efficiency determinants properly (Table 3). The most important factors that have a positive impact on the efficiency of service provision, according to the Polish respondents are high competence and skills of staff (83%), transfer of knowledge (59%) as well

**Table 2. Factors affecting efficiency in a negative way—Polish and Belarusian enterprises**

| <b>What factors have a negative influence on the efficiency of service provision?</b> | <b>1 (%)</b> | <b>2 (%)</b> | <b>3 (%)</b> | <b>4 (%)</b> | <b>5 (%)</b> | <b>Polish and Belarusian enterprises</b> |
|---|--------------|--------------|--------------|--------------|--------------|--|
| High own costs  | 2.0          | 8.0          | 16.0         | 29.0         | 45.0         | Poland                                   |
|   | 2.3          | 2.3          | 29.5         | 27.3         | 38.6         | Belarus                                  |
| Imperfect market information  | 1.0          | 11.2         | 29.6         | 37.8         | 20.4         | Poland                                   |
|   | 0.0          | 13.6         | 20.5         | 34.1         | 31.8         | Belarus                                  |
| Lack of demand for particular services  | 7.1          | 9.1          | 13.1         | 29.3         | 41.4         | Poland                                   |
|   | 6.8          | 4.5          | 9.1          | 27.3         | 52.3         | Belarus                                  |
| Lack of suitable staff  | 5.0          | 5.0          | 12.0         | 36.0         | 42.0         | Poland                                   |
|   | 0.0          | 2.3          | 22.7         | 43.2         | 31.8         | Belarus                                  |
| Lack of team bonding  | 4.0          | 11.1         | 31.3         | 28.3         | 25.3         | Poland                                   |
|   | 2.3          | 20.5         | 34.1         | 29.5         | 13.6         | Belarus                                  |
| Lack of market research   | 7.1          | 24.5         | 25.5         | 29.6         | 13.3         | Poland                                   |
|   | 4.5          | 18.2         | 27.3         | 27.3         | 22.7         | Belarus                                  |
| Lack of credit capacity (availability)  | 17.3         | 19.4         | 24.5         | 21.4         | 17.3         | Poland                                   |
|   | 6.8          | 31.8         | 31.8         | 15.9         | 13.6         | Belarus                                  |
| Lack of interest from foreign investors   | 38.8         | 25.5         | 11.2         | 17.3         | 7.1          | Poland                                   |
|   | 6.8          | 15.9         | 38.6         | 18.2         | 20.5         | Belarus                                  |
| Low level of development concession subsidies from state administration               | 28.3         | 21.2         | 25.3         | 13.1         | 12.1         | Poland                                   |
|   | 6.8          | 22.7         | 27.3         | 20.5         | 22.7         | Belarus                                  |
| Unsuitable motivational system (e.g. low salaries)                                    | 7.0          | 11.0         | 27.0         | 31.0         | 24.0         | Poland                                   |
|   | 2.3          | 9.1          | 18.2         | 47.7         | 22.7         | Belarus                                  |

Source: Own elaboration based on project research results.

as focus on a client or customer (54.5%). Entrepreneurs from Belarus shared their opinion equally about the importance of a stimulating influence of high personnel competence and skills (61.7%). However they differed in other factors, i.e. they considered customer-oriented staff (47.7%) the second most important factor and the automation of services (45.5%) as the third.

Finally the impact of selected factors on financial result maximization was examined. This impact was considered both for Poland and Belarus. On the basis of the results of correlations and the expert knowledge of the authors the

**Table 3. Factors that have a positive impact on the efficiency of service provision—Polish and Belarusian enterprises**

| Factors  | 1 (%) | 2 (%) | 3 (%) | 4 (%) | 5 (%) | Polish and Belarusian enterprises |
|--|-------|-------|-------|-------|-------|-----------------------------------|
| Staff with high competence and skills  | 0.0   | 1.0   | 3.0   | 13.0  | 83.0  | Poland                            |
|  | 2.3   | 2.3   | 6.8   | 27.3  | 61.4  | Belarus                           |
| Access to new knowledge  | 2.0   | 3.0   | 13.0  | 23.0  | 59.0  | Poland                            |
|  | 2.3   | 4.5   | 20.5  | 43.2  | 29.5  | Belarus                           |
| Good location of facility (e.g. place where there is easy access)                                    | 8.0   | 9.0   | 26.0  | 31.0  | 26.0  | Poland                            |
|  | 4.5   | 13.6  | 34.1  | 36.4  | 11.4  | Belarus                           |
| High customer focus (correct personality / empathy)  | 0.0   | 4.0   | 18.2  | 23.2  | 54.5  | Poland                            |
|  | 2.3   | 6.8   | 9.1   | 47.7  | 34.1  | Belarus                           |
| Direct manner of service provision   | 6.1   | 5.1   | 18.2  | 42.4  | 28.3  | Poland                            |
|  | 2.3   | 9.1   | 31.8  | 36.4  | 20.5  | Belarus                           |
| Semi-direct manner of service provision (e.g. online provision)                                      | 10.2  | 8.2   | 27.6  | 38.8  | 15.3  | Poland                            |
|  | 2.3   | 11.4  | 40.9  | 29.5  | 15.9  | Belarus                           |
| Growth of specialization   | 5.1   | 6.1   | 23.2  | 42.4  | 23.2  | Poland                            |
|  | 2.3   | 13.6  | 38.6  | 27.3  | 18.2  | Belarus                           |
| Investment in lessening labour consumption i.e. effort made in service delivery during working hours | 7.1   | 5.1   | 26.5  | 41.8  | 19.4  | Poland                            |
|  | 4.5   | 13.6  | 36.4  | 29.5  | 15.9  | Belarus                           |
| Service automation   | 10.2  | 8.2   | 23.5  | 37.8  | 20.4  | Poland                            |
|  | 4.5   | 2.3   | 20.5  | 45.5  | 27.3  | Belarus                           |
| Relatively large number of regular customers   | 4.1   | 4.1   | 18.6  | 42.3  | 30.9  | Poland                            |
|  | 2.3   | 9.1   | 22.7  | 36.4  | 29.5  | Belarus                           |

Source: Own elaboration based on project research results.

following variables for regression analysis were selected: access to new knowledge and its transfer, direct character of service provision, indirect character of service provision, increased specialization, investments directed at reduced labour consumption and a relatively large number of regular customers. The results of the estimation of the model parameters are presented in Table 4. Matching the model with the empirical data is at a low but accentuated level (corrected square of  $R$  equals 0.186, see Table 4).

**Table 4. Results of estimation of the model's parameters for the maximization of financial result**

| Variable   | Coefficients | Standardized coefficients | Standard error | t statistics | p-value |
|--|--------------|---------------------------|----------------|--------------|---------|
| Constant   | 1.471        | 0.423                     | –              | 3.473        | 0.001   |
| Access to new knowledge and its transfer           | 0.193        | 0.081                     | 0.202          | 2,391        | 0.018   |
| Direct character of service provision              | 0.179        | 0.083                     | 0.201          | 2.143        | 0.034   |
| Indirect character of service provision            | 0.047        | 0.085                     | 0.056          | 0.552        | 0.582   |
| Increased specialization                           | –0.055       | 0.089                     | –0.062         | –0.620       | 0.536   |
| Investments directed at reduced labour consumption | 0.099        | 0.078                     | 0.113          | 1.268        | 0.207   |
| Relatively large number of regular customers       | 0.174        | 0.080                     | 0.191          | 2.181        | 0.031   |
| <b>Model summary</b>                               |              |                           |                |              |         |
| Estimate standard error                            | 0.840        | Corrected square of R     | 0.186          | Square of R  | 0.221   |

Source: Own elaboration.

On the basis of the obtained results a significant impact of access to new knowledge and its transfer, direct character of service provision and a relatively large number of regular customers had an effect on financial result maximization. It should be stressed that the impact of all three variables is positive. In the case of the indirect character of service provision and increased specialization, however, it was found that their impact on financial result maximization is insignificant. In addition the determination of standardized coefficients allowed a ranking variables due to the level of their impact on the financial result maximization. For subsequent variables the following Standardized coefficients were obtained (see Table 4): direct character of service provision (0.083), access to new knowledge and its transfer (0.081) and the relatively large number of regular customers (0.080). Taking into account the standard error of coefficients and a similar level of standardized coefficients values the impact of all relevant variables should be considered as comparable.

## **Conclusions**

The efficiency of service provision is usually viewed from the standpoint of economy where the correct expenditure in relationship to results is crucial. However it is also meaningful to be efficient in the context of management which is connected with capability. In this respect non-economic factors gain importance and improve the process of service provision. One of the decisive factors is a system of economy which enables the freedom of running a service business activity. This includes the development of market conditions such as: the position on market, means of management, access to new knowledge, working organization and working conditions.

This paper contributes to filling the research loophole with regard to the identification of determinants of corporate efficiency in—Poland and Belarus. These are two extremely different economies in which service companies operate. The analysis of Polish and Belarussian companies allowed the identification of areas of efficiency factors in services which have the greatest significance for business entities. For Polish enterprises the main determinants of efficiency were above all connected with competent and skilled staff. Belarussian companies regarded as efficiency factors those determining the demand level by means of access to foreign markets and possibilities of internationalization.

The differences in the selection of efficiency factors in Poland and Belarus can be connected with the obstacles in running efficient service businesses in those countries. Both of them face demand and cost barriers. Moreover they are unanimous about the importance of the stimulating influence of high competencies and personnel skills. However Polish entrepreneurs have a significant problem connected with the lack of properly skilled staff. The Belarussian side sees a significant barrier in a low system of motivation which is mainly connected with low remuneration.

The determinants of the efficiency of services enterprises in Poland are mainly associated with access to employees with appropriate qualifications, which is reflected in a widespread employee labour market and shortages of labour. Still enterprises from Belarus which operate outside the European Union market have problems reaching foreign customers. Moreover in Belarus a significant problem of decreasing salaries exists which—accompanied by high inflation and the low purchasing power of the ruble—is a demotivating factor for many employees. The research also identified variables determining the level of financial result maximization. Significant variables were: access to new knowledge and its transfer, direct character of service provision and the relatively large number of regular customers, whose impact on financial result maximization is at a comparable level.



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