Economic Multiplier Effect of Shared Service Centres

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ABSTRACT

Development of Business Services market influences the growing interest in researches on increase of business value by centralizing business functions and establishment of Shared Service Centres (SSC). SSCs are usually being defined as competitive efficiency oriented business model, which plays an important role in increase of microeconomic value expressed in decreased costs, improved effectiveness and quality of the business processes. However, SSC can be also defined as economic catalyst, implementation of which leads both to microeconomic to macroeconomic value and multiplication of this value. This increase in value is known as multiplier effect, which occurs in different phases of economic value chain. Causality between different forms of Foreign Direct Investments (FDI) such as SSCs and economic growth is usually being expressed by analyzing changes of Gross Domestic Product (GDP). However, there is number of other macroeconomic indicators, which being affected by SSCs. Number of employed in SSCs is one of the indicators, which leads to wages, income, purchasing power, spending, supply and other multiplier effects.

Keywords: Shared Service Centers, Economic Value, Economic Multiplier Effect

JEL classification: D23, D29, E27, F21, J49.

Introduction

Changes in economy structure driven by development of service sector and FDI in services encourage researchers to analyze servitization of economy as well as outcomes of this phenomenon. In the light of these facts, SSC phenomenon acquires greater significance. Increasing economic value of SSC is being partially analyzed in rather fragmented scientific SSC literature and it is more actively discussed in practice oriented literature. Despite the fact that majority of researches concentrate on microeconomic aspects of implementing SSC or analyze impact of SSC on sole or few macroeconomic indicators, SSC being named as economic catalyst causes greater economic effect, which is being triggered by multiplier effect.

The aim of this scientific paper is to evaluate economic multiplier effect of SSC implementation. The objectives of this paper are:

1. To identify limitations of SSC research and multiplier effect evaluation.
2. To present economic multiplier effect based on SSC examples.
3. To evaluate SSCs multiplier effect based on example of one of the macroeconomic indicators – employment.

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Limitations of Shared Service Centres Research and Multiplier Effect Evaluation

Despite the fact that SSC topic is increasing in popularity among researchers, there are some obstacles for comprehensive analysis of SSCs, it's impact on economy and it's multiplier effect occur:

1. **Fragmentation of SSCs academic literature**. Richter and Brühl (2017) performed comprehensive SSC literature analysis. This study has shown high fragmentation of the academic literature (e.g. authors found 137 works in the initial search and 83 works in refined screen). Richter and Brühl (2017) distinguished 4 main SSC research areas: determinant-oriented perspective (mainly motives, critical success factors and other topics), process-oriented perspective (mainly organizational change and re-design and other topics), control orienter perspective (mainly coordination, governance structure and management strategy) and outcome-oriented perspective (mainly performance, efficiency, effectiveness and other topics). Richter and Brühl (2017) performed comprehensive analysis of SSC literature with scientific background. However, SSC researches can be found both in scientific and practical background literature. Scientific background literature is mainly managerial, microeconomics or mixed literature (publications in scientific journals, scientific conferences, academic dissertations, electronic books and other sources). Practical background literature is usually surveys, reports and other publications of different consulting, auditing and international researches companies, country investment promotion agencies such as Invest Lithuania, different business communities such as Associations of Business Service Leaders (ABSL[3]), Shared Services & Outsourcing Network (SSON[4]), individual insights and case studies of the companies, which implemented or implementing SSC and other practitioners.
2. **SSC as services sector FDI segment**. Some researchers conclude that service and manufacturing sectors determinant are similar and fundamental FDI theories based on manufacturing FDI can be applicable in services (Dunning, McQueen, 1982; Casson, 1990 and others). However, some researchers state that impact of FDI on state economy can be different depending on sector (Kalašinskaitė, 2009; Barkauskaitė, Naraškevičiūtė, 2014 and others) and that it is purposeful to analyze FDI aspects by separating factors, determining FDI into separate economic activities (Ruplienė, 2013). There is number of researches, which aim to reveal the economic outcome of FDI and part of them concentrate on sectorial specifics. However, SSC is a specific segment of services sector FDI, which according to authors of this scientific work has its own specifics and should be analyzed separately in more detailed way. However, comprehensive SSC segment analysis is being rarely analyzed in scientific literature, but mostly noticed in practice oriented literature.
3. **Limitations of SSCs statistical data accessibility and separation from other services sector FDI data.** Since SSC is one of the segments of services sector FDI and statistical research data can be only extracted from aggregated FDI data or SSC practice oriented literature, which usually gather data by surveying SSCs in particular geographic region. Data accessibility is usually limited due to confidentiality of surveys since there is no legal basis for collection and representing of data of such companies and data is being shared with research companies based on confidentiality agreements. Another difficulty is to

[3] One of the biggest communities in Europe.
[4] Worldwide community with over 100 000 members.

separate SSC statistics from other segments of service sector FDI. SSC is frequently being paralleled with Business Process Outsourcing (BPO). Despite the fact that some of the researches believe that SSC and BPO models should be differentiated since BPO is only related to function of one organization are being moved exclusively to external organization and SSC is just reorganization of the same company (Marciniak, 2013 and others), the majority of the researches emphasize that SSC is type of internal BPO (Cushman & Wakefield, 2015; PwC, 2015; Invest Lithuania, 2016; Keith et al, 2016; Oshri et al, 2011; Rudzioniene, Sakalauskiene, 2014 and others). SSC is also frequently being analyzed together with other business services sector organizations. As an example, ABSL (2016) report covers economic analysis of such FDI segments as SSC, BPO, IT and research & development.

4. **Managerial and microeconomic SSC aspects analysis predominance.** SSC academic literature is mainly aiming to reveal microeconomic SSC implementation value and show limited interest in paralleling SSCs with macroeconomic indicators. Managerial and microeconomic SSC aspects analysis predominance is seen according to comprehensive SSC scientific literature analysis made by Richter and Brühl (2017) mentioned above. The main SSC research areas in scientific literature are managerial (determinant-oriented, process-oriented and control-oriented perspectives) or related to microeconomic topics (outcome-oriented perspective).
5. **Limited evaluation of SSC multiplier effect**. Concentration on one or few economic indicators without evaluating the multiplier effect of SSC implementation is noticeable. The main indicator, which is being impacted by FDI, analyzed by majority of researchers in scientific background literature is traditional macroeconomic indicator – GDP (Kalašinskaitė, 2009; Ruplienė, Garšvienė, 2008; Čičak, Sorić, 2015; Kisswani et al, 2015 and others). Some authors complement GDP indicator with labor productivity, unemployment rate, diffusion of technologies, human capital formation and international trade integration (Zenasni, Benhabib, 2013; Mucuk, Demirsel, 2013; Laskienė, Pekarskienė, 2011 and others) usually by choosing one of them and by not distinguishing economic sector/SSC. Practical background literature (Invest Lithuania, 2014-2016; ABSL, 2010 and 2016 and other) distinguish more macroeconomic indicators such as labor market indicators (employment, youth employment, wages, taxes paid by employers and other), life quality indicators (learning and development, culture and values, prestigious job, health-oriented packages in SSCs and other), migration, regional development opportunities and other macroeconomic indicators. Therefore, economic indicators analysis is usually performed on more general (FDI) level and with concentration on sole or few macroeconomic indicators without evaluating multiplier effect of SSC implementation. More comprehensive macroeconomic indicator analysis with emphasize on multiplier effect is seen in practical background literature (Invest Lithuania, 2014-2017; ABSL, 2011 and 2017 and other).

Economic Multiplier Effect in Shared Service Centres

According to researchers Domański and Gwosdz (2010), multiplier effect is one of the fundamental mechanisms of local and regional development and occurs when one type of economic activity affects another (Domański, Gwosdz, 2010). Nelson (2006) stresses the important element in multiplier effect – how consumers respond to changes in their incomes. In SSC multiplier effect analysis primary consumers would be employees of SSC, who influence other value chains –

secondary services providers, suppliers etc. Increasing number of employed by SSC, whose wages are higher than country‘s average (Invest Lithuania, 2016), mainly affects the whole economy through increased purchasing power, spending etc.

Micek et al. (2010) wrote, growth in employment at newly opened and existing SSCs increases household purchasing power and results in the development of other companies that address their needs as consumers. Part of the income of employees is devoted to consumer goods and services and goes to different sectors of the economy (multiplier effects of the first order). These new jobs and related worker revenues generate continued (significantly lower) demand for consumer goods and services (the effects of second and subsequent orders). Summing all these jobs enables to determine the total income multiplier effect resulting from the activities of SSCs.

According to Tamošiūnienė et al (2016), in result of wider services portfolio of SSC and more sophisticated services provided by them, this business model accelerates the multiplier effect and especially positive economic impact on economy of host country through internal organizational aspects (new knowledge, trainings, languages, cross-country collaboration, increased wages etc.) and the external economic aspects (more secondary services due to increase in premises, opportunities for new market players as restaurants, cafes, shopping malls near the premises due to increased consumption).

Invest Lithuania (2015) complements this view by summarizing that multiplier effect of SSCs starts from primary value chain to provide the needed, continues in secondary value change and reaches tertiary value chain. From point of view of SSCs these three value chains according to author of this dissertation would be:

1. Primary value chain – resources purchased from local businesses to provide services and create the added value. Resources providers starting from premises rental, cleaning, posting and other services to additional services providers such as restaurants, shopping malls, cafes etc. purchase resources from their suppliers to satisfy their customers needs and create the added value.
2. Secondary value chain – the added value in primary value chain is being created through employees and supporting resources. Employees receive salaries, which afterwards are being spent for goods and services and also further investments are being made into supportive resources.
3. Tertiary value chain – the added value is also being created in secondary value chain where employees, additional resources and intermediaries receives their part of value chain and repeats this process accordingly.

ABSL (2011) distinguished two types of multiplier effects generated by SSCs:

1. **Financial multiplier effect** – increased incomes for local budgets expressed in property tax, the share in corporate income tax, personal income tax. However, authors of this scientific work would like to note that:
    - SSCs are usually services export-oriented organizations, which pays relatively low income tax;
    - personal income tax is incorporated in the labor related tax;
    - labor related cost would be better expression of financial multiplier effect of SSCs.
2. **Employment multiplier effect** – created in three areas: 1. Business entities itself (direct effects); 2. sectors that supply workers to the analyzed service companies, increased demand generated by SSCs for various types of services (income multiplier effects); 3. companies supplying products and services to SSC (supply multiplier effects). In terms of

employment multiplier effect ABSL (2011) emphasized income, supply and tourism business multiplier effects. ABSL (2011) estimated number of jobs that exist due to income effects from various service centres in 2010 and concluded that on average, 1,000 jobs at existing SSCs created nearly 110 jobs in sales, transport and communication, recreation and culture, housing and energy, gas, water supply, hotels and restaurants, medical services and education. According to ABSL (2011) supply multiplier effect strongly depend on the industry in which employment is created and it comes directly from suppliers, including those generated by non-salary benefits offered by employers (e.g. in medical services, education, and recreation). ABSL (2011) emphasized tourism business multiplier effect and calculated that all visitors in Krakow use about 19,500 hotel nights per year what results in maintaining at least 50 jobs in hotels, 30 jobs in catering, 6 jobs related to transport, trade, and culture.

Multiplier effect theoretical aspects are mainly discussed in scientific background literature. However, empirical studies of multiplier effect, although are rare, but are more common in practical background literature. Empirical study example of ABSL (2011) shows that SSCs statistical data accessibility previously mentioned in this scientific work is substantial obstacle for comprehensive analysis of multiplier effect in SSCs.

Evaluation of Economic Multiplier Effect of Employment in Shared Service Center in Lithuania

According to Invest Lithuania, there were 51 SSCs in Lithuania in January 2017, average number of employees in SSC in Lithuania was 232 (Invest Lithuania, 2017). According to ABSL (2016), average salary of employed was EUR 1.373 (Lithuanian average in 2016 Q3 was EUR 783,3 according to State Social Insurance Fund), total number of employed in SSCs counted 12.500, growth of created jobs in SSCs reached 11 % and projected number of jobs by 2020 is 19.000 what means 52 % growth from 2016. According to Statistics Lithuania (2017), the number of employed in Lithuania during 2016 Q3 was 1.255.462. Therefore, 6.500 employed in SSCs until 2020 would increase number of employed by 5%, which would cover around one third of job vacancies in Lithuania (according to Statistics Lithuania (2017), number of job vacancies in 2016 Q3 was 16,890).

Authors of this scientific work presume that labor related costs are one of the most important financial multiplier effects of SSCs and present Chart 1 with calculations, which shows that according to prejection that until 2020 SSCs create 2.167 jobs annually, additional 19,6 mln EUR, 71,7 mln EUR and 66,4 mln EUR of job related taxes would be paid each year. These costs include from 1 % to 3 % of all companies and personal taxes paid in 2016 Q3 what shows another part of financial multiplier effect mentioned by ABSL (2011).

Chart 1: Labor Related Cost Multiplier Effect of Projected Increase of Employment in SSC

Year	Projected annual average wage, EUR[5]	Projected annual number of employed in SSCs	Projected SSCs annual job related costs, EUR[6]	Projected employee annual job related costs, EUR[7]	Projected total annual job related costs, EUR	Companies and personal taxes paid in 2016 Q3
2017	1.373,00	2167	11.068.082,52	8.568.838,08	19.636.920,60	1.774.731.000,00
2018	1.458,13	4334	23.508.607,27	18.200.212,08	41.708.819,35	
2019	1.548,53	6501	37.449.211,39	28.992.937,85	66.442.149,23	

Source: Made by authors based on ABSL (2016), Ministry of Finance of the Republic of Lithuania (2016), Statistics Lithuania (2017)

To continue with labor cost related multiplier effects, based on authors estimated how would additional projected jobs in SSCs influence VAT revenues according to following formulas:

$$\frac{ACE}{AW} = ER$$

$$PVATR = ER \times PW \times VAT$$

Where:

ACE – average consumptione expenditures, EUR (2012 data from Statistics Lithuania and 5% growth estimated each year);
AW – average wage in Lithuania, EUR (State Social Insurance Fund);
ER – expense ratio;
PW – projected wage;
VAT – Value Added Tax, 23%;
PVATR – projected VAT revenues.

With average expense ratio of 0,56 each year, projected VAT revenue is be EUR 1.734.026,04 during 2017-2019 years. According to average expense ratio other taxes can be also calculated. And similar calculations can be used in secondary and tertiary value chains of multiplier effect.

One more multiplier effect of SSC is impact on commercial real estate market. According to Hygiene Standard in Lithuania, one employee must have 6 sq. meters of premises. Eika analysis (2015) has shown that currently average workplace area in A, B+ business centres in Vilnius is 10.5 sq. meters for one employee. Rental price of 1 sq. meter of premises in Vilnius, where the majority of SSCs are concentrated (Invest Lithuania, 2017), costs from 3,5 to 16,5 EUR per month depending on the location. In average 131.251 sq. meters of business centres are occupied by SSCs employees what generates from EUR 5.512.500 to EUR 25.987.500 revenue for building owners/administrators. Constantly increasing SSC market creates demand for new premises and this effect is seen in construction market of commercial real estate. Ober Haus (2015) calculated that 38.000 sq. meters of commercial real estate was built in Vilnius.

[5] Average annual wage increase of 6,2% estimated according to projections of Ministry of Finance of the Republic of Lithuania (2016).
[6] 30,98% social contribution and 0,2 % contribution to the guarantee fund.
[7] 15 % personal income tax, 6 % health insurance, 3 % pension and social contribution.

Chart 2: Other Multiplier Effects of Employment in SSC

Benefits for SSC employees and spendings related to these benefits	Health insurance, cultural and sport events, discounts for goods and services, trainings, conferences, coffe machines, fruits, meal packages etc.
Increasing purchasing power of young people	More spendings
Transporation services	Taxi, private, public and other transportation services – part of them paid by SSCs as work to travel expenses, another part purchased by employees of SSCs
Food, drinks suppliers	Increasing number of restaurants, cafes near business centres provoked by demand from SSCs employees
Hotels	International teams have guests from other countries on a daily basis
Re-emigration and decrease in youth emigration	According to surveys made by Invest Lithuania (2015, 2016), 12% of employed by SSCs are repatriates and the largest shares of repatriates employed by surveyed SSC is 47%. What is more, the existing open positions in SSCs in Lithuania motivates governmental institutions such as Invest Lithuania and others to organize different kind of young and educated emigrants oriented events with aim to both improve investment environment in Lithuania and make influence on re-emigration.
Other	…

Source: Made by authors

Other multipliers effects of employment in SSC are presented in Chart 2 above and can be complemented by additional economic indicators, which need further investigation.

Conclusions

The shift from manufacturing to services economy forces organizations to re-think their business strategies, to react to the recent servitization trends and look for new efficiency oriented-business models such as SSC, which proved its attractiveness both from microeconomic and macroeconomic prospective.

However, such SSC research as scientific literature fragmentation, separation of SSCs and their statistics from other service sectors FDI data, managerial and microeconomic SSC aspects analysis predominance complicates the evaluation of SSCs multiplier effects.

Nevertheless, researchers distinguish financial, employment and other SSCs multipliers effects, which are noticeable in primary, secondary and tertiary value chains starting from SSC itself, it‘s employees and reaching suppliers, intermediaries and their employees and suppliers etc.

Authors evaluated economic multiplier effect of employment in SSCs in Lithuania. Guideline for multiplier effects from labor related costs and taxes dependable on labor costs was presented, according to which further calculations of multiplier effect related to other costs can be derived.

Other possible SSCs multiplier effects were presented. Further research of presented economic phenomenon is required to provide the evidence from SSCs economic multiplier effects.

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