
INDUSTRIES IN CENTRAL AND EASTERN EUROPE ARE MAKING STRIDES TOWARD SERVICITIZATION

BURNETE Sorin

Lucian Blaga University of Sibiu, Romania

Abstract:

This paper is intended to examine, without empirical evidence, the way industries in Central and Eastern Europe are heading toward convergence of knowledge-intensive sectors. Emboldened by European Union's commitment to become the world's most competitive entity, industries in the new member countries are phasing out low skilled labor-intensive activities such as subcontracting of final assembly, concomitantly trying to integrate skilled labor-intensive inputs in production. Following a powerful trend that is manifest in global manufacturing, firms in the region are endeavoring to enhance the value of their offerings by providing knowledge-intensive services in addition to physical products. Like in the case of trade in intermediate inputs, the producer service business is extending toward economies in Central and Eastern Europe mostly via East-West trade, outsourcing being the chief conveyance vehicle. However, unlike intermediate inputs, knowledge-intensive services are dependent to a lesser degree on foreign investment in physical capital but rather on host-countries' self-induced technological and educational progress.

Key words: *servitization, outsourcing, human capital*

1. Introduction

In this paper I focus on the way industries in Central and East European countries (CEEs) are responding to a relatively recent trend in global business: integration of services into manufacturing. In the first part, I try to show that attaining this target is challenging because it requires far-reaching changes in firms' strategies, organizational practices and market positioning. But above all, in order to become services providers, manufacturing firms must possess high innovating strengths. Since the CEEs still manifest conspicuous weaknesses from this last point of view, they must build such capabilities by luring western companies into the region, either through foreign direct investment (offshoring) or arm's length trade (offshore outsourcing). It is for this reason that in the second part I outline a few characteristics of the international trade industrial activities, which is by all means an emblem of globalization. In the third part, I try to show that trade in services is in no way different from the trade in physical

inputs simply because services are subject to the standardization process just like the goods; this means that, as services become routine, they will be likely to be moved offshore. In the fourth part, I argue that CEE firms are reliable targets for the outsourcing of knowledge intensive services. I end the paper with a few conclusions.

2. A novel business model: servitization

Convergence of manufacturing and services is gaining impetus on the global scale due to the growing importance of the service business for the future of manufacturing sectors; services offer growth opportunities beyond the potential of firms' installed base. (Kuczka & Gebauer, 2011) The share of such services in the total demand and production of both advanced and emerging economies has steadily increased over time. The service output of manufacturing firms, also termed "convergence process" has grown in importance over the last decades in terms of both value added and employment.

The term servitization was coined by Vandermerwe & Rada (1988) and refers to the growing tendency among manufacturing companies throughout the world to provide services in addition to physical products, in an attempt to enhance the value of their offerings. An alternative term is "service infusion". (Brax, 2005) The "servitization" paradigm has several facets: strategically, firms' primary objective is "to gain a competitive edge". (Vandermerwe & Rada, 1988) Technically, servitization refers to customer-targeted services that accompany the manufactured goods, in a full package form. According to Apte & Mason (1995), the "service component" of a manufacturing process includes product/process design, inbound/outbound logistics, management information systems, finance, accounting, marketing etc. From the organizational management perspective, servitization "changes the whole company and affects especially product design, logistic structure and service operations." (Karlsson, 2007) Vladimirova et al. (2011) argue that organizations undergoing this type of process "are likely to change their strategies, operations and value chains, technologies, people expertise and system integration capabilities". Financially, the shift of focus toward provision of services has been determined by the services' potential to yield equal and even higher returns-on-sales than physical products let alone the fact that they "need none or very limited capital investment". (Ekstrand, 2004) Last but not least, services can reinforce the producer-customer relationship. Services enhance customers' satisfaction by helping them in "the use of the product in its function, deployment or application". (Weissenberger-Eibl a& Biege, 2010) However, as Neely (2008) contends, there is still limited empirical evidence to ascertain the true impact of servitization i.e. the extent to which it is being adopted in practice. In fact, the process is not utterly smooth because it requires a change in managers' mindset. As Gebauer & Fleisch (2007) noted, managers have to overcome some of the typical behavioral processes of manufacturing companies.

3. Outsourcing: bits of conventional theory

As Bond (2001) remarked, vertical specialization has rendered the production process of firms “increasingly fragmented internationally”. Fragmentation most often occurs through outsourcing, which has, among others, two important characteristics: first, it has “productivity enhancing effects due to knowledge spill-over...” (Mohiuddin, 2011); second, it is centered (unlike offshoring) on sales-type activities, which allows international trade to act as a vehicle for the transmission of knowledge-intensive products and services from developed to emerging economies. (Shouming et al., 2010)

The outsourcing issue, mainly as regards strategies and motivations, has been lavishly dealt with in recent literature. The terminology was pinpointed (inter alia) by Sass and Fifekova (2011): the offshoring term has a broader scope, generally meaning the relocation of economic activities across national borders. If the transfer implies asset ownership, it takes the form of captive offshoring; failing FDI component, the process is termed offshore outsourcing. A significant number of economic writings on outsourcing have addressed the issue from the firms’ perspective. Technically, it refers to “the delivery of products or services by an external provider that is, one outside the boundaries of the firm” (Manning et al., 2008); if the subcontractor is located in a foreign country, the firm “engages in foreign (offshore) outsourcing, or arm’s-length trade”. (Anràs & Helpman, 2004) Motivations can be expressed generically by the “make-or-buy” dichotomy that is the firms’ discretion to opt between two alternatives concerning the procurement of intermediate inputs and services: to produce them internally or contract them out to independent suppliers. Thus, in a broader approach, the decision to outsource is basically a problem of corporate organization efficiency. As Grossman and Helpman (2002) put it, there is a “trade-off between the costs of running a large and less specialized organization and costs that arise from search frictions and imperfect contracting”. More importantly still, outsourcing generates significant productivity gains at the plant level. As for the outsourcing (hiring) firm, by shifting a number of production stages abroad, it will be able to reallocate resources to the remainder, presumed most efficient. From this standpoint, Görg, Hanley and Ströbl (2008) found that statistically, the effects are more significant for exporters than for purely domestic firms. On the other side, subcontractors also take advantage of productivity enhancing effects due to knowledge spill-over. All in all, the decision to outsource is of utmost importance for firms’ competitiveness and profitability, a fact rightly underscored by Kohler (2004): it can be “a key strategy for higher profitability and sometimes even corporate survival”.

Outsourcing strategies are generally centered on firms’ tendency to externalize chiefly routine activities, while keeping the ones containing latest technology and/or highly specialized knowledge inside their boundaries. It follows that in case of foreign outsourcing, production will be split internationally according to countries’ factor endowment. As Hijzen et al. (2005) noted: “unskilled labor-intensive stages of production tend to be shifted to unskilled labor-abundant developing countries, while

more technologically advanced stages remain in skilled labor-abundant developed countries". This statement is in line with an empirical observation by Antràs (2003): "capital-intensive goods are transacted within firm boundaries, while labor-intensive goods are traded at arm's length". This is all the more valid in the case of offshore outsourcing when firms often seek to cut labor costs by shifting manufacturing to lower-wage countries. However, as emphasized by Antràs and Helpman (2004) and Antràs (2005), such cost savings may be cancelled out by other sunk costs stemming from the need to search for subcontractors, gauge their capacity and/or accountability and grapple with "contractual frictions".

4. The boom in outsourcing of knowledge intensive services

The decision to outsource is of utmost importance for firms' competitiveness and profitability (Kohler, 2004): in order to cut costs, firms tend to produce capital-intensive goods in their home countries, while transferring the labor-intensive ones (or parts thereof) to cheap labor countries and trading them at arm's length. (Antràs, 2003) On the other hand, firms that move parts of their production processes offshore commonly intend to enhance their organizational efficiency: offshoring, with or without FDI component, spurs innovativeness in that it generates significant productivity gains at both plant and sector level. This particular aspect makes even more sense if regarded through the prism of the product cycle hypothesis: "innovators seem more willing to resort to licensing and subcontracting in standardized goods with few product development requirements". (Antràs, 2005) Briefly, according to the mainstream outlook, firms tend to contract out chiefly routine activities, while keeping the ones containing latest technology and/or highly specialized knowledge inside their boundaries. Yet this trend has dimmed a great deal of late: economic activities that require intensive use of knowledge and high skilled labor are being increasingly traded internationally.

How relevant is the above body of scholarship in a business environment when service infusion has become a yardstick for global success? Kowalkowski et al. (2011) suggest internationalization is more risky and complex for service-oriented than for product-oriented companies due to "the inherent characteristics of services", which imply "local presence and customer-supplier interactions". Despite such inconveniences, all categories of business services including the ones that are intended to support product offerings are increasingly traded internationally. Since services vary in knowledge and skill intensity (Kuczaj and Gebauer, 2011), they are, the same as products, subject to standardization criteria; this is one reason for which product-related services, "from basic research to product design, from preparation and installation of machinery and the production of components, to assembly, packing, marketing, and shipping" (Grossman and Helpman, 2002), are easily moved offshore. As Guzik and Micek (2008) point out, it is not just routine services that make up the

object of offshoring but also “those that engender high skills and knowledge...attention has turned to offshoring and outsourcing not only routine business services but also those that engender high skills and knowledge.” Briefly, servitization is actually broadening the scope of offshoring, with or without capital investment.

5. CEEs are reliable targets for the outsourcing of knowledge intensive services

Under stiff competition from both inside and outside the EU, new member-countries are abandoning subcontracting of marginal operations such as final assembly and heading toward convergence of manufacturing and services. CEEs' firms are trying to add a number of valuable services such as design, production organization, financing, logistics systems etc. to the physical products they offer. The main vehicle for this shift is outsourcing: production is being shared between western companies and partners from the CEEs according to relative endowment with human capital; as CEEs' workers' skills and qualifications rise through intensive training and learning, activities with ever higher content of skilled labor will move eastward. Still, the gap between older members and the fresh entrants is considerable in respect of industries' own efforts. As European Commission's Competitiveness Report (2011) suggests, while the former depend on own R&D performance for more than half their technical knowledge, the latter depend on knowledge embodied in inter-industry trade for more than four fifths of the total technology intensity; moreover, CEEs have a relatively lower share of high-tech and a lower share of skilled labor in manufacturing relative to the older group, which means their potential for using knowledge-intensive services is also lower. The bottom line is that the new EU member countries are deriving their technical knowledge mostly from their trade with western firms.

According to recent research, highly innovative manufacturing sectors have a higher share of services in total output.¹ From this last point of view, CEE industries are still seriously lagging behind their western counterparts. Moreover, the gap is even wider considering that western manufacturers' service output is made up mostly of knowledge intensive business services (KIBS).² However, the KIBS intensity of CEEs' exports rose substantially lately despite their relatively weak position on the market of technology intensive goods. As the European Commission (2011) emphasize, KIBS have been the main source of job creation and also contributed substantially to value added growth in Europe in the last decade. Unfortunately the dispersion of production of and trade in KIBS across the 27 EU economies is strikingly uneven: the EU-15 is the major player on the KIBS market, with a share in global KIBS exports of around 50 percent (the US has the second biggest share in KIBS exports with 15 percent, while India is in third place with a 6 percent share). The EU is also the biggest player in the market for technology-intensive goods, with a share of 35 percent in 2007 (the second biggest exporter in this market is China, with a share of 12 percent in 2007). Unfortunately the EU-12 have a much weaker position in the market for technology-

intensive goods although their share is increasing fast — from 1 percent in 1996 to 3.6 percent in 2007 (the EU-12 and China have approximately equal volumes of exports and imports of KIBS). It is also important to note that KIBS activities represent a large share of the total cost of production in manufacturing and consequently, they are not only exported directly, but also indirectly through goods. The KIBS intensity of both EU-15 and EU-12 exports has risen substantially on a value added basis.

6. Conclusions

European integration sparked a boom in the trade and investment relations between the western and eastern halves of the continent. However, it would be mistaken to consider the removal of barriers as the unique cause of the two regions getting closer to each other. Equally important is the wide range of opportunities new (and would-be) EU member-countries can offer to western partners, besides cheaper labor. Not only is CEEs' workforce able to perform skilled labor intensive operations costs of outsourcing to CEEs are relatively low: overt costs are low due to geographic proximity; sunk costs are low due to the long-standing relationships between companies from the two parts of the continent, which have reduced the psychic distance between them thereby preempting contractual frictions.

However, the prospect that CEE industries will succeed in integrating production with services depends on multinationals' incentives to move high skilled intensive activities offshore, either through capital investment (captive offshoring) or arm's length trade (offshore outsourcing). Although location-related incentives are strong, they are not always the chief driving forces behind offshoring/outsourcing; host countries firms' propensity to innovate is quite another. While CEE firms manifest incontestable advantage in a host of domains, innovativeness is probably their chief weakness.

7. Notes

1. The group of industries with high innovation intensity include: machinery and equipment; office machinery and computers; electrical machinery and apparatus; communication technology; medical, precision and optical instruments. From among medium-high innovation intensive industries one can mention: textiles, rubber and plastic products; coke, ref. petroleum products and nuclear fuels; motor vehicles, trailers and semi-trailers; others. Medium-low innovation intensive industries are e.g.: Food products, beverages; tobacco products; others. Industries that are labor intensive i.e. mining, wearing apparel, leather products, wholesale trade, water transport etc., generally have low innovation-intensiveness. (Peneder, 2010)
2. KIBS include (non-exhaustively) the following main types of services: "computer programming, consultancy and related activities" (62), "information service activities" (63), "legal and accounting activities" (69), "activities of head offices; management consultancy activities" (70), "architectural and engineering activities; technical testing and analysis" (71) "computer services, scientific research and development" (72), "advertising and market

research" (73) and "other professional, scientific and technical activities (74). Yet some categories of services cannot be rigorously defined in terms of knowledge intensiveness. In reality, it is difficult to mark a strict borderline between KIBS and non-KIBS. Certain services (e.g. accounting, financing, quality control etc.) though knowledge intensive are more or less routine business practices. (Eurostat: *NACE Rev.2, Statistical classification of economic activities in the European Union*, 2008)

8. References

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