

International Production in Russia: Possible Effects of Forward and Backward Linkages

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Abstract

The paper examines some important consequences of international production – effects of forward and backward linkages that include effects of technology transfer and effects of productivity generation. The author pays a special attention to the fact that companies of the receiving country should possess appropriate absorptive capacity in order to use advantages of establishing forward and backward linkages effectively. Such opportunities are created in the Russian automotive industry where the local manufacturers of spare parts and components for the automotive industry act as outsourcers for the global OEMs.

Keywords

International production, direct foreign investment, forward and backward linkages, absorptive capacity, Russia, automotive industry.

Introduction

MNC (multinational corporations), playing the key role in the global economy, associate national economies by cross-border exchange of capitals, knowledge, ideas and systems of value creation. Their interaction with institutes, organizations and private persons generates both positive and negative effects. Consequences of MNC activities are sometimes matched with consequences or effects of globalization. A great number of works is devoted to the issue of analysis of effects of the international production, under which we understand production within the scope of the national economy, but under the control from abroad. The majority of them notice that these effects represent a peculiar combination of positive and negative consequences which are specific for each individually accepted receiving country (Meyer, 2003). In this connection the consensus of what effects should be considered positive and what of them negative has not been reached yet, except the undisputable fact. that extension of the international production in the country certainly contributes to its deeper integration into the global economy.

Prior to continuing our presentation it is necessary to make a serious remark. Many research works insert the character of equality between the effects of direct foreign investment (DFI) and effects of international production. Such approach is quite logical, because the direct foreign investments represent the key element of creation of the international production. But effects of the international production are of a more complex character as – besides the direct foreign investments creating the international production – such mechanisms like contract relations with independent companies in the territory of the receiving countries are applied as well. Nonetheless, in our paper we will deal mainly with effects of the direct foreign investments, being the core effects of international production.

We offer to determine several trends of analysis of possible consequences of international production (or realization of the project with foreign investments), in particular: macroeconomic effects; effects of forward and backward linkages; institutional effects; environmental effects; social and political effects. The most important trend of analysis of effects of direct foreign investments is connected with analysis of the effect of forward and backward linkages, linked closely with institutional effects. Objective of this paper consists in analyzing possible effects of forward and backward linkages between companies of two countries: the country investing its capital abroad in order to create the international production and the country “receiving” this capital, in the territory of which the international production is generated. In our case Russia plays the role of the receiving country. This direction of research is in principle at the stage of formation, the basic part of research has been performed on the material of developing and transition countries which can be clarified by importance of these effects for the countries of the types as above.

Effects of forward and backward linkages of technology transfer

Direct links between the companies in vertically organized branches are considered the basic channel for transfer of external effects of economic activities for a long time already; the literature sources differentiate two kinds of these links – impact of the investor’s company on the company of the receiving country and vice versa. The effects of forward and backward linkages thus take the form of mutual double-sided links. Creation of the links between the investors and the local companies is the most interesting aspect here in the field of transfer and corresponding adaptation of the technology and in the field of generating productivity effects.

Many researchers share the view that the direct foreign investments represent the most important instrument for acceleration of the Schumpeter “creative destruction” (Schumpeter, 2008) of the old structures on the emerging markets. Direct foreign investments play the critical role in transfer of the necessary technological, marketing and management know-how, increase of international competitiveness of the receiving countries and in easier access to the global markets. MNC increase productivity of the local companies by granting the technical assistance to them and by training their staff in order to increase quality of production of the suppliers; MNC assist in managing the company as well as in purchasing raw materials. In addition to it, direct foreign investments can increase demand for intermediates, thus giving possibility to the local suppliers to realize the effect of economies of scale of production (Meyer, 2003). This interaction generates the external economic effects, if the transferring MNC does not take all advantages of such technology transfer for itself, e.g. by reducing the retail prices (such situation can often occur due to unequal market position of MNC and of the local supplier).

Degree of these vertical external effects varies, depending on the branch and on the specific project. It depends for instance on how close are these linkages in the supply chain and on the degree, within which the manufacturers rely on the intermediates for their own production (as they can save the transport costs or make a direct interaction between the companies). Market orientation of the foreign investor can also be of certain importance: the companies focused on the local market can consider advantageous for them to find local suppliers satisfying all requirements for safety. On the other side the manufacturers focused on export can be integrated into the global system of the mother company through outsourcing strategies, i.e. the MNC developing business on the local market, can select - either to rely on the local suppliers, developing feedback or to focus themselves on other sources of deliveries, especially where branches of foreign companies work as outsourcers for the mother MNC.

Forward and backward linkages and growth of productivity

Positive effect of MNC presence in the national economy and development of international production can also be connected with growth of productivity. Higher performance indicators of MNC follow from utilization of sophisticated technology, methods of production, availability of international network of suppliers, buyers, customers, companies working under contract as well as from intangible assets – all of them together creating a powerful source of value creation (OECD, 2007).

As the foreign branches have a higher productivity and better technology than the local companies at the medium level, this fact rises the average efficiency and productivity in the receiving country. Work of K. Yudaeva and her colleagues, Centre of Economic and Financial Research and Development (Yudaeva et al, 2001), contains comparative analysis of productivity of the Russian companies and companies owned by a foreign entity with the registered seat in the territory of Russia. It has been proved, based on the Goscomstat (now Rosstat) data about Russian and foreign companies for the time period 1992 – 1997 that productivity of the home medium-sized companies (200 – 1000 employees) is statistically positively connected with the share of foreign companies in industry output in the region in question and that the effect grows in the regions with a high level of education of the inhabitants. The authors also came to the conclusion that output of small companies drops in presence of foreigners, most probably due to stronger competition. It has also been determined that this effect depends strongly on the degree of progress of the reforms in the region. In the regions where the reforms were running slowly, productivity of foreign companies was much more lower than in other regions. The level of the human capital in the region is one of the most important factors enabling the Russian companies to survive and benefit from existence of foreign competitors.

“Absorptive capacity” and effects of forward and backward linkages

Arrival of MNC can thus create an important channel for transfer of knowledge and technology in the receiving country. But absence of educated and qualified workforce and of the absorptive capacity can in general restrict positive effect of such transfer of knowledge for the countries with emerging markets, incl. Russia. One more direction of theoretical research, where importance of capacities, possibilities and initiatives of recipient of investment itself is stressed, is worth mentioning in this connection. The researchers have come to the consensus that the receiving countries have to possess a certain level of their own human capital so that they may benefit from transfer of knowledge from MNC. This prerequisite has been formulated on the basis of the concept of “absorptive capacity”, key contribution to development of which has been made by Cohen and Levinthal (Cohen, Levinthal, 1990) – they believe that the absorptive capacity is “capacity of the company to recognize value of the new information coming from outside, to assimilate it and to find commercial application for it”.

The private companies may utilize the knowledge introduced through interaction with foreign investors, provided that they make their own investment into the R+D sector, train their staff and adapt their organizational structures to “absorption” of the innovations. The companies must possess adequate absorptive capacity in order to accept, receive and integrate knowledge from other sources. Empirical studies of the absorptive capacity are performed at the corporate and branch level and both directions of research pinpoint importance of the local human capital. Liu, Sile, Wang and Wei (Liu et al, 2000) have presented in their work that presence of the foreign factor in the relevant sector affects productivity of labour of the local companies positively, i.e. results of this research coincide with results of research performed by K. Yudaeva, based on the Russian data.

Efficiency of the “absorptive capacity” is connected directly with institutional environment of the receiving country. The institutional environment sets the framework of business of the economic entity, and compatibility of technological, economic and cultural infrastructure of the countries delivering and receiving the technologies is one of the most important prerequisites for successful cross-border exchange of technologies. There are material institutional barriers for international transfer of technologies in the Russian economy. In addition to it, the direct foreign investments themselves can contribute materially to development of the institutes supporting normal functioning of the market economy. By lobbying, the foreign investors can exert pressure on the local governments regarding changes of the institutional framework for their own interests. The desire to attract direct foreign investments can stimulate the national governments not only to liberalize the relevant legislation, but also to adopt legislation of general character that would facilitate business of the foreign entity in the receiving country. The major investors cooperate and interact closely with the local administration thus affecting not only content and scope of the adopted acts, but also their application.

There is one more type of institutional advantages following from the role of the direct foreign investment in the sphere of business services and infrastructure. For instance investments in the financial sector have stimulated overcoming of “fragility” and weakness of the financial sector in the transition countries, incl. Russia. Foreign investments in the telecommunication sector lead to powerful improvement in the technology and in growth of competitors in this sector, thanks to which the sector of telecommunications has been developed materially in Russia, thus contributing to growth of productivity. Similar effects of the direct foreign investments can be found even in other branches such as energy distribution, airports, etc., though specific research has not been performed in these sectors.

Effects of forward and backward linkages in the Russian automotive industry

Positive effects of creation of forward and backwards linkages can be seen in the Russian automotive industry. During the last ten years basis for the international production has been created dynamically in this industry. All leading global car manufacturers (BMW, Citroen, FIAT, Ford, General Motors, Hyundai, KIA, Nissan, Peugeot, Renault, Suzuki, Toyota, Volkswagen and others) have already entered the Russian market and for this purpose they have applied the strategies like export, licensing and also direct foreign investments for organization of mechanical and industrial assembly of cars of foreign brands. All the facts above led to occurrence of the cross-border value chains in the Russian automotive industry, in particular such links like assembly, manufacture of completing parts as well as sale and service.

Creation of the link in the cross-border value chain connected with manufacture and deliveries of car components (localization of production) means that the process of outsourcing is developed step by step in the Russian tool and component production, though at the initial stage only. Localization of production of the car components is in principle due to expansion of business of the foreign manufacturers in Russia, because they possess the necessary technology, experience of manufacture, whilst the Russian companies are still unable to ensure quality of the components at the level of international standards. But the Russian companies have favourable possibilities to integrate themselves into the newly forming chains of value creation. They consist in building close forward and backward linkages between the foreign OEM and the Russian suppliers with step-by-step increase of the degree of competitiveness of the Russian suppliers. Possibilities for effective incorporation of the Russian manufacturers of car components into the cross-border value chains and reach of a higher share of added value (compared with the current situation) follow just from the facts above. But realization of these favourable possibilities is connected materially with a certain level of the absorptive capacity of the Russian companies that have to exert every effort to reach this level.

Conclusion

Tightness of forward and backward linkages has grown steadily recently depending on whether or not the international manufacturing networks, created MNC became the dominating structure in the globalizing world economy. All this has led to fundamental changes in the methods, through which MNC interact with the local companies and also resulted in serious consequences for economic development of the countries with emerging markets.

The paper has examined possible effects of forward and backward linkages between companies of two countries: the country which invests capital abroad in order to create the international production and the country which “receives” this capital and in the territory of which the international production is established. The author comes to the conclusion that possibility of the local companies to be integrated into international production networks (consisting in cross-border value chains) is one of the most important effect of establishing the forward and backward linkages. The local companies can thus be qualified for obtaining a certain share of added value created in the whole economic system.

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Summary

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International Production in Russia: Possible Effects of Forward and Backward Linkages

The article examines some important consequences of international production – the effects of forward and backward linkages that include effects of technology transfer and generating productivity effects. The author pays special attention that the firms of receiving country should possess appropriate absorptive capacity in order to use effectively advantages of establishing forwards and backward linkages. Such opportunities are created in Russian automotive industry, where local producers of car components act as outsourcers for works OEMs.

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