Framework for the analysis of geography of transnational corporations investments abroad
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This article develops a methodology for studying corporate geography — an area of human geography that remains understudied in Russia. The author refers to foreign direct investment (FDI) studies to stress the importance of analysing individual transnational corporations. Special attention is paid to FDI statistics, including international statistics provided by the IMF, OECD, and UNCTAD, official data of central banks on FDI destinations, and information on companies assets by geographical segments. The article emphasises limitations of classical localisation concepts (e.g. Lösch’s theory) and key concepts of transnationalisation (e.g. Dunning’s ‘eclectic paradigm’, Vernon’s ‘product life cycle’, and the ‘flying geese paradigm’ developed by Japanese authors). Dynamic localisation concepts (e.g. the Uppsala model and hierarchical/wave diffusion models) are considered an important contribution to the existing theoretical framework for studying FDI geography. Various patterns of spatial distribution of FDI are examined taking Russian transboundary investments (including those distorted by the ‘neighbourhood effect’) as an example.

Key words: foreign direct investments (FDI), transnational corporation (TNC), dynamic localisation concepts, corporate geography

A reduction in transboundary investment caused by the unfavourable economic situation and the ‘sanction war’ with the West has been a focus of animated discussions in Russia. Indeed, the foreign direct investment stock decreased from USD 471.5 billion as of January 1, 2014, to USD 269.5 billion as of October 1, 2015 [3]. At the same time, the amount of reciprocal Russian FDI decreased from USD 385.3 billion to USD 277.2 billion1. FDI from indi-

1 The data was collected based on the directional principle, which partly excludes offshore pseudo-FDI, unlike the asset/liability principle.

vidual partner states showed a truly dramatic drop. For instance, the US FDI in Russia plunged over this period from USD 18 billion to 2.7 billion. However, a mass exodus of American, Swedish, or other western multinational corporations (MNCs) from Russia did not take place.

This situation requires an analysis of FDI at not only the macro- but also microlevel. We believe that only an examination of corporate geography can separate situational fluctuations of official rates, which is usually caused by asset revaluation following either stock market crashes or re-registration of company in other countries, from the actual severance of business contacts. An analysis of selected MNC does not give an abstract view of investment connections with the world but rather describes relations with individual partner states, which is important for evaluating the geographical diversification of external ties.

**Corporate Geography as a Special Research Area**

A new type of economic geographical studies focusing on corporate geography was proposed over half a century ago [23]. Geographers aspired to give a clearer definition of the object of business structure studies [17; 20], in part because spatial aspects of operations of multi-facility corporations, including MNCs, had been considered in numerous works on economy (for an overview of such works see [13]). At the same time, some researchers did not want to limit themselves to company geography and tried to identify common geographical patterns in the development of global economic ties when studying spatial aspects of business operations (one of the pioneering works is [14]).

Russian scholars’ interest in corporate geography increased as market reforms were launched in the country. Some of the works focus on business location — distribution of major MNCs by country and location of their headquarters, their decision-making centres [9], — and geographical aspects of internal organisation of MNCs and regional management models [4]. Other publications seek to modernise traditional areas of economic geography through studying corporate geography. In particular, it is proposed to augment the analysis of national and regional structure of external economic ties with a study into the geography of investment connections of individual MNCs [5] and to examine industrial geography but in view of their affiliation with different business groups rather than at the level of individual companies [7; 10]. Moreover, it has been proposed to develop a special field — corporate studies — to revise a number of areas of human social geography [12].

Still, most works of Russian geographers have strived to use empirical data on MNCs only as a complement to the traditional approaches to studies in economic geography.

For instance, analyses of cluster and industrial geography are based on information about the construction or purchases of facilities by investing companies but they do not take into account the logic of companies’ spatial
development [8]. Most literature on company location are based on classical location theories [1]. Other well-known theories utilized are John H. Dunning’s eclectic paradigm, Raymond Vernon’s product life-cycle theory, and the flying geese paradigm developed by Japanese economists [11]. In our opinion, the role of dynamic location concepts, which were proposed by geographers as early as the 1970s, is underestimated in MNC analysis. However, a textbook published 20 years ago at the Lomonosov Moscow State University familiarised students with an extensive array of such concepts [2].

Statistics for Assessing FDI Geography

According to UNCTAD’s broad definition, an MNC is any company that makes FDI, i.e. investment in at least 10% of shares of any foreign asset. In most countries, including Russia, detailed official information on the geography, scale and changes in FDI is published by central banks. In several, mostly federative states (including Russia), data on regional FDI location are also disclosed. More seldom, FDI data are collected by national statistical services (in Russia, Rosstat publishes its information on foreign investors alongside the Central Bank).

International comparisons usually use data provided by UNCTAD, IMF, and OECD. It is important to stress that publications of international organisations rely on national statistics (sometimes, it is preliminary data, since reporting periods can differ from country to country). In other words, a table on an international organisation’s website may contain data sets that are not completely comparable, which complicates any analysis of foreign investment geography. Moreover, central banks of different states, although following the OECD and IMF guidelines, use their own FDI assessment methodologies (for instance, they may apply disparate accountable thresholds or different FDI stock assessment methods for different years, etc.).

The IMF website provides detailed 2009—2014 data (as of the end of each year) on FDI stock geography — capital exports from almost 70 states and FDI stock in approximately 100 recipient countries. Data on the same country presented in two tables (FDI exports and imports) may contain major discrepancies, especially in case of round-tripping FDI through offshore centres or trans-shipping FDI (if ‘shipping terminals’ are used on the way of investment to third countries). According to the national data, Cyprus received FDI worth USD 149.4 billion. According to the aggregate data of home countries, it was worth USD 269.6 billion. In the case of Russia, these numbers were USD 36.1 billion and 96.5 billion respectively, which can be easily explained — many Russian-owned companies are registered on Cyprus and in a number of Caribbean offshore centres. In other words, Russian statistics suggests a mass exodus of capital to Cyprus. In effect, FDI in Cyprus is made at a much smaller scale. A typical case is one of the leading Russian investors in Estonia — Globaltrans. Despite Russian control and even the publication of data in an English-language financial statement in roubles, Globaltrans is registered on Cyprus and its FDI geography is not
covered by the official statistics. As of the end of 2014, 18.3% of 76 billion roubles of the company’s long-term foreign assets were allocated abroad, of which 90% (12.8 billion roubles, i.e. USD 227 million) in Estonia and only 1.8 million roubles on Cyprus [16].

This means that international organisations do not provide quality statistics and researchers are left to compare national data on FDI stock geography. Many countries have published such information since the 1970s, thus a study in transnationalisation development can rely on longer temporal series of data than an analysis of international statistics can provide.

Another problem associated with an analysis of MNC FDI geography is that the official FDI statistics, following OECD guidelines, includes direct allocations of individuals, in addition to those of companies. In particular, articles 323 and 324 of OECD ‘benchmark definition’ of FDI, interpret it as investment of natural persons who have acquired at least 10% of the ownership of property in another economy, be this property a holiday home or another building that is not used in commercial purposes [24]. In the case of Russia, according to our estimates, up to a fourth of FDI exports are such investment. In some countries, for instance Spain and Latvia, more than half of Russian FDI is in residential property.

FDI information usually underestimates the data of MNCs, although such data serve as a principal source of information for central banks. Moreover, many MNCs provide open access to their financial statements. According to IFRS accounting standards, reportable geographical segments are those that account for at least 10% of the total assets. There is still a problem of different approaches to segment identification. Some MNCs consolidate all foreign operations into a single segment, as a result, such a large investor in the Baltics as Lukoil does not provide data on assets in the region. Other MNCs may use a broad interpretation of ‘home market’ (some Russian companies consider the whole CIS as such, Swedish companies all the Nordic countries, German ones the whole EU, etc.) [6]. However, companies show an increasing propensity to publish data on the value of their long-term assets by country. Annual reports and newsletters often contain detailed information on localisation and reasons behind it are sometimes explained.

When analysing corporate FDI geography, financial statement statistics can be supplemented with business media reports providing expert opinions on investment values. Such reports are used as a major information sources in compiling databases giving an adequate idea of MNCs’ geographical priorities. Of special importance are databases providing information on mergers and acquisitions (Thomson Reuters and UNCTAD), reciprocal FDI in Europe (Ernst&Young), and direct investment from CIS and Eurasia (Primakov National Research Institute of World Economy and International Relations of the Russian Academy of Sciences).

Using different types of sources in FDI analysis makes it possible to gain a clearer perspective on the company’s transboundary investment ties shown by official statistics. Russian MNCs are a typical case. For a number of states, which often serve as ‘shipment terminals’ for third-country MNCs (Cyprus, Switzerland, Luxembourg), Russia’s Central Bank quotes FDI
stock rates that are much higher than the actual investment of Russian companies (the Central Bank’s assessments take into account only the first recipient in the long cross-ownership chains). At the same time, the actual FDI of Russian companies in some countries is significantly underestimated. These are primarily CIS countries, as well as Iraq, India, Pakistan, and Bangladesh. For instance, before the Ukraine crisis, Russian FDI in Ukraine was three times the Central Bank assessment (the uncovered investment reached USD 10 bullion), since most of FDI was received through offshore centres. If the FDI were estimated accurately, Ukraine — rather than Cyprus — would top the list of primary Russian investment recipients.

The scale of Russian MNCs’s FDI identified makes it possible to assess the actual role of Russian businesses as foreign investors in certain countries. Outside the post-Soviet space, Russia has a strong investment presence in Iraq and Bangladesh, where the country accounts for over 20% of total FDI. Russia’s leading MNCs (Lukoil and Vimpelcom) have entered the Asian states via third countries. However, Russia’s business presence in these two countries is not as strong as in such CIS countries as Tajikistan and Armenia, where more than a half of total FDI comes from Russia, or Belarus and Uzbekistan, where Russia accounts for more than 40%. This means that, at the level of companies’ economic ties, there are prerequisites for developing regional integration in post-Soviet space, i.e. the EAEU is not a solely political project. It is not only the ‘neighbourhood effect’ that matters — the proportion of Russian investment in the EU states bordering on Russia is much smaller than that in the CIS. In Poland and Finland (as well as Germany and Sweden), Russia’s FDI stock does not reach 1%, in the Baltics, it is less than 10%, which is much lower than in any CIS country.

A comprehensive analysis of the official and corporate statistics also makes it possible to estimate the actual FDI in Russia. In effect, the leading sources of FDI in Russia are companies from Germany, France, the US (whereas, according to the Central Bank data as on October 1, 2015, they ranked fourth, seventh, and sixteenth), and smaller states — Austria, Sweden, and Finland (ranked 11th, 13th, and 14th respectively) [3]. Moreover, using corporate statement data makes it possible to analyse FDI at the level of national regions and individual cities.

A Conceptual Framework for MNCs Investment Geography Analysis

Analyses of agricultural and industrial geography led to the emergence of various location concepts. In the 1930s, some scholars — including August Lösch — made attempts to systematise these concepts [22]. However, static location concepts failed to describe the dynamic economic reality of the second half of the 20th century. Service industry development and accelerating scientific progress, which affected technology and company location factors, the increasing volatility of resource prices, and the multi-facility pattern of large companies evolving into MNCs, required new approaches.

This attention to theoretical explanations of company growth increased in the 1950s [26]. Special concepts explaining the MNC phenomenon were
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developed at the time. Later, Dunning’s eclectic paradigm became the most influential FDI concept [15]. Despite its illustrative quality and analytical merits, it offers a static solution to localisation of foreign investment. Although capable of explaining how and why a company begins to export capital, this theory does not answer the question as to what makes an MNC continue its expansion abroad. Nor does it say why a company selects certain countries for FDI and ignores others with similar characteristics. The turning point was the Harvard MNC research project, which resulted in the product lifecycle concept [28]. From the perspective of geographical analysis of investment, it was shown that, different stages of a product’s life impose different requirements on capital, human resources, scientific potential, etc. Although it turned out later that not all products follow an extended lifecycle, which makes it possible to change production geography during the transition to a next stage. In the 1970s, this concept provided an adequate explanation of the mass exodus of industrial production from developed to developing countries. Moreover, the members of the Harvard project team were the first to describe the ‘neighbourhood effect’ in FDI geography (Canada and the US were considered) — MNCs giving preference to neighbouring countries, which could not be explained within Dunning’s concept.

In the 1970s, the new approach to FDI was applied by Japanese economists. Revising the militaristic ‘flying geese’ concept, they attempted to reconcile the macroeconomic approach to external trade studies (in the framework of the Heckscher-Ohlin model) with microeconomic MNC studies. Since then, the concepts have become more complex [25]. Certain features of gradual internationalisation of businesses in some countries under the impact of MNC investment from more developed states have been observed in not only Pacific Asia but also Europe. For instance, in the early 1990s, German companies started to invest in Poland and later used the country as a platform for development in the former USSR countries.

New concepts resting on geographical theories emerged in the 1970s in Sweden and spread worldwide. An alternative to Dunning’s concept was the Uppsala model [19], which has not been very popular in Russia so far. Based on the applied works of WH Davidson and JW Vaupel (both within the product lifecycle paradigm), this model paid special attention to FDI geography. Swedish scholars approached an adequate description of the actual FDI decision-making mechanisms using the findings of economic psychologists and behaviourists. The two central ideas of the Uppsala model are as follows:

1) Entering foreign markets is a high-risk managerial decision made in conditions of uncertainty. Due to the lack of experience in solving new problems, internationalisation is carried out in several stages. At first, the simplest forms of external trade are used, followed by ones that are more complex. Gradually, the firm becomes involved in foreign production (from assembly lines to integrated plants). Schemes of MNC development stages were proposed [18]. However, our studies suggest that the characteristics of service industry and the opportunity for top managers to draw on the experience of other MNCs create a situation when internationalisation stages are not pronounced in many firms.
2) The geography of MNCs’ external ties is strongly affected by the ‘psychological distance’, which is determined by both the actual distance and ethnocultural and language barriers. This results in the spatial FDI diffusion with country-specific MNC patterns, which are often accounted for by the ‘neighbourhood effect’.

Our calculations show that the ‘neighbourhood effect’ should not be considered as a universal factor [21]. Although psychological barriers are rather important, FDI geography is affected — alongside the awareness factor and solely economy motives — by international politics, which is evident in the case of Russia’s investment ties with the Baltics.

Another dynamic approach to analysing FDI originates from the concept of spatial diffusion proposed by the Swedish geographer Torsten Hägerstrand. His approach was used to describe FDI spillovers in the case of Japanese companies in the Federal Republic of Germany [27]. Later we demonstrated that the basic hierarchical wave model of MNCs’ FDI diffusion (at the level of subsidiaries and local branches) was characteristic only of manufacturers of low-tech mass market products or companies providing standard services [7]. The hierarchical element suggests that subsidiaries are located in large centres at first and only later in secondary centres. The wave element suggests gradual FDI spillover from centres to the periphery. It is often difficult to distinguish between the hierarchical and wave elements. By economy of scale, the model can be simplified. The geographical pattern is seriously distorted by the ‘neighbourhood effect’ or pre-FDI cooperation ties between MNCs and recipient companies (this excludes the process of gradual growth in the potential investor’s awareness). In some industries, for instance, oil and gas, hierarchical wave diffusion is not observed, since location options are restricted by the geography of natural resources and — often — by public regulations.

Relying on dynamic location concepts makes it possible to identify major trends in direct investment. Of course, each investor has individual location motives, but the actual behaviour of all MNCs can often be easily explained by rather simple laws (moreover, MNCs often use decisions made by pioneering investors, especially compatriots, as guidelines).

Although a significant increase in FDI made by emerging Russian MNCs was observed only in 2004—2008, some companies have already evolved from regional into truly global MNCs. For instance, VimpelCom, which started its international expansion in CIS in 2004, undertook FDI in former socialist countries and South-East Asia in 2008. In 2011, its expansion became global, involving Italy, South Asia, Arab countries, and Tropical Africa. Another case is Sberbank, which launched overseas operations in CIS and later purchased assets in Turkey and Central Eastern Europe. There are numerous cases of gradual internationalisation accompanied by a dwindling ‘neighbourhood effect’ among Russian manufacturing MNCs. For example, EuroChem, which had owned assets in European Russia, gained control over a Lithuanian fertiliser company in 2002. Ten years later, EuroChem bought a factory in Belgium, in 2013 it launched extraction operations in Kazakhstan, in 2014 it had FDI in China, and in 2015, in the US.
At the national level, patterns of hierarchical wave FDI diffusion are rather clear in the cases of international MNCs entering Russian markets. McDonald's, which has already invested over USD 1 billion in Russia with more than 500 restaurants in over 50 regions, is a typical case of hierarchical wave FDI diffusion. The corporation’s first restaurant opened in Moscow in 1990. Over the next ten years, McDonald’s opened 38 new restaurants in the capital and 32 outlets in the towns of the Moscow region (the onset of the wave element). The hierarchical element of FDI diffusion of the US company became evident in 1996, when its first restaurant was opened in Saint Petersburg. Later, the company’s outlets started to appear in the other European cities of Russia with a population of over one million — Nizhny Novgorod (1997), Kazan and Samara (1999), Rostov-on-Don (2001). Wave diffusion was observed in all cities above. McDonald’s came to the Ural region only in the 2000s and there are no outlets yet in Eastern Siberia and Far East.

The Baltika brewing company controlled by Baltic Beverages Holding represents a case of simplified FDI diffusion under the scale effect accompanied by the displacement of the first centre by the neighbourhood effect. In 1993, the Nordic investors purchased 75% of shares of the Baltika brewery in Saint Petersburg. In 1996, Baltika became the owner of 60% of shares of the Yaroslavl company Yarpivo (later, these proportions increased). In 1997, the company gained control of factories in Rostov-on-Don and Tula (the facilities were later expanded). In 1999, the firm went beyond the European part of Russia, gaining control of factories in Chelyabinsk (it was closed in 2015) and Krasnoyarsk. Diffusion continued in 2002—2003, when new facilities were built in a suburb of Samara and in Khabarovsk and shares of a Voronezh brewery were bought. In 2007—2008, another factory was built in Novosibirsk.

Despite the fact that the spatial diffusion of certain — primarily engineering — companies does not fit the universal models, analysing data on a broad array of companies makes it possible to identify various FDI spillover patterns.

Firstly, major FDI recipients are the largest economic centres, primarily Moscow and Saint Petersburg (the latter is dominated by Nordic investors, although their proportion is gradually decreasing at the expense of the neighbouring regions). Sporadic increases in the contribution of large centres does not refute the hierarchical wave model, since they are associated with new groups of MNCs entering Russian markets as the national investment climate improves (for the ‘newcomers’, diffusion is just starting).

Secondly, FDI geography of individual countries reflects the ‘neighbourhood effect’. For instance, according to the Central Bank data, Karelia has an FDI stock worth USD 234 million with Finland accounting for USD 64 million (the country ranks first in terms of FDI). According to official statistics, Finland is outperformed only by Cyprus in Saint Petersburg (Finland has invested USD 1093 million and Germany — Russia’s major investment partner — only 667 million). At the same time, Far East is dominated by Eastern Asian investor. In the Primorsky region, South Korean FDI is the second largest following the pseudo-foreign investment from Cyprus. The
‘neighbourhood effect’ is especially pronounced in the countries that are not renowned as capital exporters. For instance, out of USD 465 million in the Kaliningrad region, Lithuania accounts for USD 39 million, whereas the total investment of this country in Russia reaches USD 129 million.

Conclusions for applied studies

The FDI spillover patterns described above can be used to stimulate an inflow of investment in Russian regions. Identifying a region’s position in the hierarchical wave diffusion of companies with a certain industrial or national affiliation (although there are numerous distortions and deviations from the basic model) will make it possible to develop a better understanding of the successes and failures of the government’s investment policy.

An interesting case is Saint Petersburg, which, theoretically, should be the second location centre for foreign retail chains and the first for Nordic MNCs. Indeed, the famous German retailer Metro Cash and Carry opened its store in Saint Petersburg in 2003, just two years later than in Moscow and one year earlier than in Kazan. However, Russia’s largest foreign-controlled retailer Auchan, which came to the Moscow region in 2002, opened a hypermarket in Saint Petersburg only in 2006, which was several days later than in Nizhny Novgorod and Yekaterinburg. Despite the ‘neighbourhood effect’, Sweden’s IKEA first came to Moscow in 2000, although the store was operated from the German subsidiary. The first Saint Petersburg store was opened only at the end of 2003, just several months before Kazan (the Saint Petersburg construction was frozen in the aftermath of a conflict with the authorities).

In the Tyumen region, the FDI stock reached USD 15.4 billion (excluding autonomous regions) as of October 2015. It was outperformed by only four Russian regions. However, the EU accounted for 99% of the investment, despite the fact that Tyumen is situated in the Asian part of Russia. The ‘neighbourhood effect’ in FDI geography suggests the region’s investment potential for FDI from Asia is underdeveloped. Thus, alongside diversifying investment contacts through the US, the Tyumen region has to pay attention to such significant sources of capital as Japan, China, the Republic of Korea, and Singapore. An analysis of the appearance of certain MNCs in the Tyumen region (Auchan stores, McDonald’s restaurants, operations of other MNCs following the hierarchical wave diffusion mode) shows that the region often loses to its neighbourhood in the unofficial investment ‘hierarchies’. As a result, the region’s success is largely explained by natural resources rather than the local authorities’ investment policy.

Dynamic concepts of location make it possible to provide universal recommendations for certain types of regions. In border regions, it is important to raise awareness among potential investors from the neighbouring countries. This requires translating regional investment websites not only into English but also Finnish (in the North-West) and Chinese (in the Far East).

It is also possible to provide recommendations for Russian neighbours. Today, there are only isolated cases of Russian MNCs using Finland, the Baltics, and Poland as starting points for further investment in the EU.
part, this is a result of the smaller states concerns about the potential dominance of Russian business structures. However, a hierarchical wave diffusion model shows that Russian MNCs will not strive to capture their narrow markets — after gaining the necessary experience of working under the EU legislation in party Russia-speaking environment, these companies will expand to other EU states. As a result, Russian neighbours on the Baltic will receive additional FDI.

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