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**TRANSNATIONAL CORPORATIONS
IN THE ECONOMIES
OF DEVELOPING COUNTRIES
AND COUNTRIES WITH ECONOMIES
IN TRANSITION
(FOR EXAMPLE, THE FEDERAL REPUBLIC
OF BRAZIL AND THE RUSSIAN FEDERATION)**

Monograph

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The monograph is devoted to the study of the place and role of transnational corporations (TNCs) in the economies of developing countries and countries with economies in transition using the example of the Federative Republic of Brazil and the Russian Federation. The representative material analyzes the influence of TNCs on the economy of these countries, formulates areas for improving their activities in the markets.

The monograph is aimed at senior and middle management personnel of large companies and holdings working in the field of international business, employees of research and consulting organizations, teachers, graduate students and university students, as well as readers interested in the development of the global economy and TNCs in modern conditions and in the future.

***Keywords:** transnational corporations, economies of developing countries, economies of countries with economies in transition, international business*

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INTRODUCTION

Currently, in effect of occurring globalization processes, in the world economy, individual countries and regions interrelation and interdependence are increasing every year. Consequently, transnational corporations (TNC) actively participate in these processes and they have been able to establish a sufficient basis for further expansion of their activities over the past decade. Formation and expansion of TNCs, particularly in developing countries and countries with economies in transition, is primarily due to a complex network of international production and localization activities on promising markets at the expense of foreign direct investments (FDI). Every year these processes are increasingly becoming one of the key components of the global economy.

There are many options to evaluate TNCs' activities: foreign direct investments (FDI), portfolio investment, contracts. TNCs form, deepen and expand the system of international production and trade with their help. Assessing the extent of the TNCs international integration activities in each of these forms is often quite complicated, especially when it comes to the economy of individual countries and sectors.

Currently, the most relevant indicator of the TNCs trends development is foreign direct investments (FDI), which serve as the main international exchange of capital instrument. Speaking of FDI, there is good data composed of systematic statistical materials, which is sufficient to evaluate the TNCs participation in varying countries in international integration and globalization processes, including their activities in various sectors.

In 2012, the world FDI inflows amounted to 1351 billion US dollars, whereas by 2018 FDI inflows rose up to 1430 billion US dollars¹. Diverse TNCs activity in different spheres of the world economy means that nowadays TNCs control over 50% of world production and more than 65% of world trade, thereby forming more than 25% of global GDP.

According to the UN methodology, Russia and Brazil, BRICS member states, are defined as developing countries. Since the beginning of the 21st century, BRICS states have reinforced their positions in the world economy. In 2012, these countries accounted for about 27.1% of world GDP; this proportion rose to 32.7% by 2018².

However, there is a number of institutional issues hindering TNCs development in Russia and Brazil. There is a huge gap remaining between Russian and Brazil TNCs and the world's largest TNCs headquartered in developed countries, which is due to advanced manufacturing technologies, financial resources shortage, inefficient management methods, absence of

¹ UNCTAD. World Investment Report 2018. – URL: https://unctad.org/en/PublicationsLibrary/wir2018_overview_ru.pdf (accessed: 20.04.2019).

²EconomicData.ru. Statistics: Brazil – URL: https://www.economicdata.ru/country.php?menu=america-country&cu_id=28&cu_ticker=BRA&country_show=economics (accessed: 20.04.2019).

high level international territorial production diversification, high level of corruption and, in general, closed and low economy transparency.

This explains a need in deeper analysis of both impact of TNCs on the economies of Russia and Brazil and, in turn, the influence of the economies of Russia and Brazil on the TNCs activities, which results in the relevance of the chosen research topic.

The degree of research topic scientific development. S. Hymer, the founder of the international production theory, considered linkages between TNCs and direct investment. In the following years, various aspects of the TNCs activities in international economic relations have been examined by a number of economists, namely, P. Buckley, J. Dunning, N. Behrman, R. Vernon, R. Grosse, C. Kindleberger, M. Casson, K. Kojima, S. Lall, J McManus, T. Ozawa, M. Porter, etc.

The TNCs activities in the context of the overall capital transfers problems have been characterized in the works of B. Olin, E. Heckscher, K. Iversen, R. Nurkse and other researchers, who spurred more specific publications on the TNCs activities carried out by E. Penrose, M. Posner, G. Hufbauer, R. Coase.

Problems of TNCs activities in different world regions and countries are covered in the works of such authors as A.S. Belousov, T.J. Belous, V.A. Vinogradov, N.P. Gusakov, R.I. Zimenkov, A.V. Kuznetsov, A.G. Movsesyan, E.P. Ostrovskaya, E.M. Romanova, G.P. Solus, L.N. Fedyakina, E.S. Hesin, Y.I. Yudanov, J. Humphrey, O. Memedovic, J. Sturgeon, etc.

In domestic literature, the problems of TNCs' functioning in developing countries and their international exchange of capital participation are observed in the works of I.O. Abramova, O.T. Bogomolov, N.A. Volgina, S.Y. Glazyev, S.V. Zhukov, A.V. Kuznetsov, A.A. Movsesyan, V.A. Oreshkin, G.E. Roshchin, L.L. Fituni, B.A. Heifetz.

The purpose of the monograph is to draw conclusions about the strength and directions of the main impacts of TNCs on the Brazilian and Russian economy by conducting an analysis of the Russian and Brazilian TNCs.

Tasks of the monograph:

- to describe the nature and content of the concept of 'transnational corporation';
- to identify key factors and characteristics of the modern transnational business in developing countries, countries with economies in transition;
- to consider the role of TNCs in developing countries and countries with economies in transition;
- to analyze the Russian and Brazilian economies' key trends from the perspective of the impact on the TNCs activities;
- to assess the regulatory environment of TNCs in Russia and Brazil;

- to identify the TNCs activities key issues on the Russia and Brazil markets and give guidance to them;
- to evaluate the TNCs impact on the economies of Russia and Brazil by using correlation and regression analysis to draw conclusions about the main factors of influence.

The object of the research is the economies of developing countries and countries with economies in transition (Brazil and Russia) and the subject of the research is the TNCs activities in the economies of developing countries and countries with economies in transition (Brazil and Russia).

The hypothesis of the research is as follows: the result of the TNCs activities in export-import and investment operations has a direct impact on the economy of developing countries and countries with economies in transition.

The novelty of the research is included in the following conclusions which have been made upon the research conducted:

- identified a direct positive correlation between the level of globalization and economy of Brazil and Russia;
- based on the results of conducted regression and correlation analysis described the level of tightness and link formula (based on constructed trendline) between pairs of parameters characterizing the activities of TNCs in the economies of Russia and Brazil: Export-GDP, Import-GDP, FDI-GDP.

Research information base involves an extensive number of works by Russian and foreign scientists, data collected from the UN sources, UNCTAD, the International Monetary Fund, the World Bank, the Central Bank of Russia and Brazil, Customs statistics of Russia and Brazil, Federal statistical service of Russia and Brazil, legal acts regulating the TNCs activities in Russia and Brazil, international agencies data, press materials.

Research methods used in the monograph include correlation and regression analysis methods, factor analysis methods, extrapolation, expert evaluation methods, time series analysis, synthesis, inductive, generalizations.

The theoretical significance of the research lies in the fact that conclusions of the monograph constitute the basis for further research of trade and economic cooperation between the BRICS countries, as well as their economic processes integration within the framework of the TNCs activities.

The practical significance of the research is comprised of the results of the correlation and regression analysis that can be used for the Russian and Brazilian economies scenario planning, as well as for the countries under consideration strategy development and further identification of the factors affecting TNCs.

The structure and content of the monograph:

- the introduction encompasses the relevance, purpose, objectives, object, subject, research methods, theoretical and practical significance of the research\$
- the first chapter describes the key features of the developing countries and countries with economies in transition transnationalization process;

- the second chapter analyzes the economies of Russia and Brazil from the perspective of TNCs activities;
- in the third chapter, a study of the impact of TNCs performance on the economy of Russia and Brazil using correlation and regression analysis is provided;
- in conclusion, the key findings of the research are formulated.

Approbation of the results of the research. 4 works were published on the topic of the research: 3 are presented at international scientific conferences, 1 is published in the journal.

The monograph was prepared by the author's team consisting of Professor Tumin V.M., Associate Professor Kostromin P.A., representing Moscow Polytechnic University, and Jorubova F.S. – practicing economist and business consultant.

Chapter 1. TRANSNATIONALIZATION OF THE ECONOMIES OF DEVELOPING COUNTRIES AND COUNTRIES WITH ECONOMIES IN TRANSITION

1.1 TNCs: concept, criteria for attribution, types

Nowadays development in the international economy and international trade is increasingly defined by globalization. Transnational corporations (TNCs) play a big role in this process. They have a number of apparent advantages as compared to start-up companies and national enterprises: efficient use of material resources, labour force and timing budget; cost-cutting at the expense of scale economy; technology and capital flow from countries and sectors with higher unit costs to ones with lower unit costs, as a result, a more efficient use of available resources and capital assets. According to the Heckscher – Ohlin theory of international trade, countries, and sectors where comparative labor content per unit of output is lower score an advantage¹. Transnational corporations take advantage of the backdrop of the world market due to a number of reasons²:

1. The sophistication of market relations – increased competition on the national and international markets; creation of barriers to entry and exit (tariff barriers), increased the homogeneity of market relations; regulatory tightening of corporation' activity and the stakeholders' attention to the results of their activity;

2. Creation and development of global value chains – diffusion of technological innovations, development of crowdfunding, innovative projects outsourcing, high-tech frames;

3. Growth of economic, ecological and social ties between countries and national economies, hence TNCs become the main trendwatchers of advanced technical, economic and social projects;

4. Trends in the conglomeration of national enterprises and economies in global value chains. Within this framework, international economic unions assume importance for they aim at liberalizing and facilitating entrepreneurship on a cross-border scale. The main organizations are ASEAN, OPEC, SCO, APEC, EU, WTO;

¹ Regional economy and spatial development. In 2 volumes Volume 1 : a textbook for undergraduate and graduate / under the general editorship of L. E. Limonov. — 2nd ed. — M.: Yurayt Publishing house, 2017. — 319 p. — Series : Bachelor and master. Academic course. — ISBN 978-5-534-05252-7.

² Future of working. 7 Advantages and Disadvantages of Multinational Corporations. – URL: <https://futureofworking.com/7-advantages-and-disadvantages-of-multinational-corporations/> (accessed: 20.04.2019).

5. Level increase in the TNC's activities in the context of the sustainable development concept – an increase in corporation's transparency, the growth of investments in the 'green business', formalisation of requirements for corporate and social responsibility, ecological consequences, and corporations' integrated reporting, including those entering international commodity, currency and stock exchanges (NASDAQ, FTSE, LSE¹).

The major goal of TNCs' role in the global value chains is the creation of a unified system of the world economy by means of unifying fragmented enterprises within one general value chain (GVCs as one of the reasons for the business transnationalisation will be examined in section 1.2 from the perspective of value added groups of companies²). Russian and Brazilian markets are attractive for foreign investors, however, internal barriers hamper the creation of the mentioned above chains. Thus, it is relevant to carry out a research on the TNCs on these markets, identify key problems and suggest ways of solution based on perspectives of foreign direct investments and state private partnership and interaction with small and medium business in these countries³.

Value added is the difference between the price of the product at different stages of its production. For instance, if taking the chain 'raw materials – semi-finished goods – end product – goods for resale', each next step adds a fixed interest to the product value. As a result, the value of a semi-finished good becomes higher than the value of raw material, the value of an end product is higher than the value of a semi-finished good and the value of a reprocessed and distributed product is accordingly higher than the value of an end product at the enterprise. This takes places due to labor costs (salaries), fuel and energy costs, general expenses of production, general administrative expenses, business expenses, i.e. key elements of the calculation provisions. Figure 1.1 shows both backward and forward linkages.

That said, the added value is created in both of them. However, export-oriented countries are more likely to undergo risks of global raw materials price fluctuations and more dependent on the import of technologies. Russia is one of the brightest examples of such countries: the budget is shaped owing to oil incomes and home industry largely depends on the import of the so-called 'high chemistry'. The transition from one development paradigm to another is always challenging for both the country and for the TNCs which represent the country on the world market.

¹ Blackwellpublishing. The Multinational Corporation. – URL: http://www.blackwellpublishing.com/content/BPL_Images/Content_store/Sample_Chapter/0631233423/Gooderham_001.pdf (accessed: 20.04.2019).

² Kukushkina Yu. M. Global value chains and corporate interests of transnational corporations // Journal of Modern competition. – 2016. – Vol. 10. – №2(56). – p. 107-117.

³ Shimko P. D. Economics of transnational companies : textbook and workshop for undergraduate and graduate / P. D. Shimko, D. P. Shimko. — 2nd ed., rew. and add.. — Moscow : Yurayt Publishing house, 2018. — 339 p. — (Series : Bachelor and master. Academic course.). — ISBN 978-5-534-01335-1.

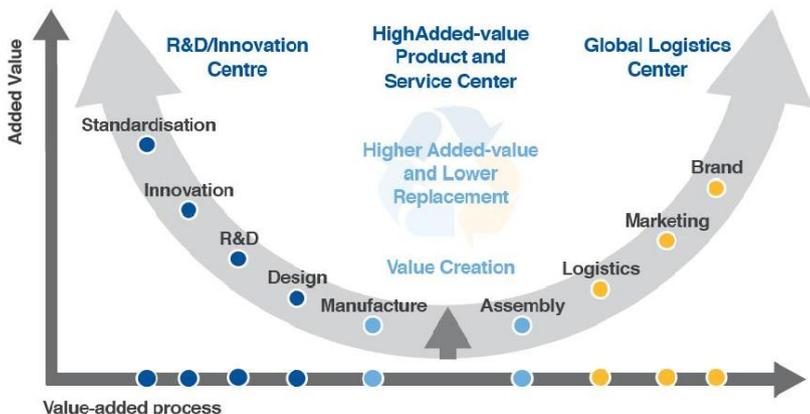


Figure 1.1. — GVCs circuit – «Smile Face»¹

This transition is also known under the name of the Dutch disease. In the middle of the 20th century, the Netherlands has discovered a new gas deposit, however, in 1972 the global energy market forced the country's shift from catching-up development to outstripping development. Consequently,

Amsterdam has become one of the cities leading in the number of start-up companies per capita, i.e. it has shifted from forwarding linkages towards backward linkages²³.

The TNCs' activity within the framework of the GVCs may exist in different forms: diversified business (often producing not interrelated goods, e.g. Virgin Group, BIC), segmented and highly segmented business (orientation towards specific products on a specific market for a limited number of consumers, e.g. BI Consult, Rolls-Royce), different forms of cooperation (sophisticated and expensive projects, including creation of investment pools and financial-industrial groups, for example NASA and Roscosmos or Space-X and Rocket and Space Corporation Energia). Diversified holding open joint stock companies as a form of corporate relations dominate in international trade.

The increasing role of TNCs in the world economy is closely related to globalization. Its nature is manifested in the confluence of material, intellectu-

¹ Aftershock. Putin : In fact, we have experienced large-scale deindustrialization. Loss of quality and total simplification of the production structure. — URL: <https://aftershock.news/?q=node%2F701564> (accessed: 20.04.2019).

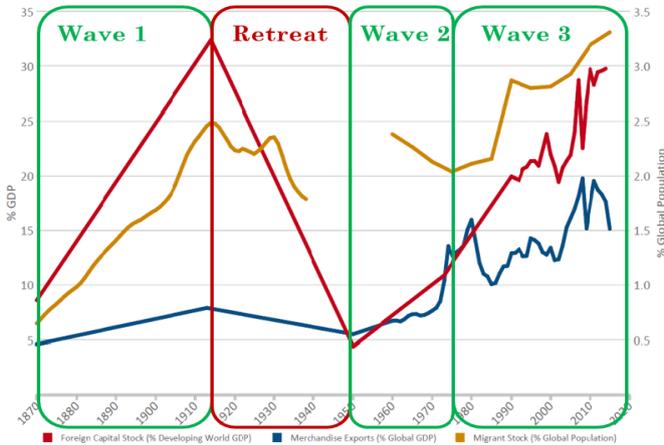
² Stragis Yu. P. History of Economics in 2 parts. Part 2 : textbook for universities / Yu. P. Stragis. — 2nd ed., Rev. and additional — Moscow : Yurayt Publishing house, 2019. — 354 p. — (Series : Russian Universities). — ISBN 978-5-534-04822-3.

³ Stragis Yu. P. History of Economics in 2 parts. Part 1 : textbook for universities / Yu. P. Stragis. — 2nd ed., Rev. and additional — Moscow : Yurayt Publishing house, 2019. — 177 p. — (Series : Russian Universities). — ISBN 978-5-534-04820-9.

al, financial, labor (sometimes legal) streams across state borders and continents¹. Historically, globalization has been developing in several key stages.

It appeared as a separate notion for the first time in the 19th century in light of growing colonial trade (in the British Empire, France, German Empire, Spain, Portugal²), thus world investment rates represented in figure 1.2 are so high.

Figure 1.2. — Three waves of globalization³



One can notice that the level of investments is even higher than the modern figures. This is possible due to the following mathematical paradox: ensuring high investment rates is easier within small figures than in an extensive system. Let us cite an example: doubling the sales growth from 2 mln rubles to 4 mln rubles is easier and faster than doubling it from 4 mln to 8 mln. At the same time, equal 2 mln sales growth in the shift from 2 to 8 gives a 100% increase, whereas the shift from 100 to 102 gives only a 2% increase, which is 50 times less. Thus, one can see in the figure that the slope of the curve between 1800 and 1860 is significantly greater than the analogous angle between 1960 and 2020 despite the analysis period is the same. It will be more noticeable if we are to compose a correlation equation of capital increase at the end of the 19th century. The equation of linear regression points at the fact that the Industrial Revolution, which took place at the end of the

¹ Boston Consulting Group. The power of diversified companies during crises. – URL: http://image-src.bcg.com/Images/BCG_The_Power_of_Diversified_Companies_During_Crisis_Jan_12_tcm27-106136.pdf (accessed: 20.04.2019).

² Grechko E. A. Geographical differences of corporate governance systems : studies. Handbook for academic bachelor's / E. A. Grechko. — 2nd ed., rev. and add. — Moscow : Yurayt Publishing house, 2019. — 156 p. — (Series : Bachelor. Academic course. Module.) — ISBN 978-5-534-08616-4.

³ AGF Management Limited. Has technology become an enemy of globalization? – URL: <https://www.agf.com/ca/en/insights/market-commentaries/articles/article-has-technology-become-an-enemy-of-globalization.jsp> (accessed: 20.04.2019).

19th century (depending on an industrial sector), greatly encouraged international trade with its peak at the beginning of the World War 1¹.

Starting in 1920 there was a break-neck fall in production which did not reach the pre-war level in many countries by 1939 (the first year of World War 2). Further development since 1950 has been showing stable but not booming growth rate worldwide and in the TNCs' sales. This is largely due to the fact that world trade and TNCs as a sample of world trade in miniature are closed systems with communications as a feedback loop. In general terms, it can be developed as shown in figure 1.3.

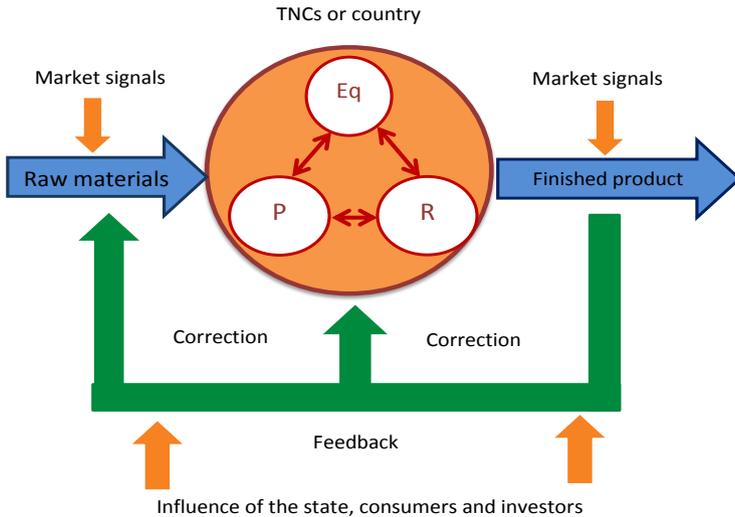


Figure 1.3. — Country/ TNC development scheme from the system perspective (compiled by the author)

This figure allows us to make a statement that there is a direct positive relation between world investments, world GDP and global population. Also, it is natural because it is impossible to ensure investments growth in the context of population decline. This is where the system approach ‘Human resources is key’ applies, that is population growth increases the number of investors as well as the number of trading operations, thus, business gains momentum and so does the world GDP².

¹ LawBook.online. Definition and characteristics of a transnational Corporation. – URL: <https://lawbook.online/pravo-torgovli-mejdunarodnoe/ponyatie-priznaki-transnatsionalnoy-15557.html> (accessed: 20.04.2019).

² Kuznetsova G. V. International trade in goods and services in 2 parts. Part 2. : tutorial and workshop for undergraduate and graduate / G. V. Kuznetsova, G. V. Podbirala. — 2nd ed, rew. and add. — Moscow : Yurayt Publishing house, 2019. — 273 p. — (Series : Bachelor and master. Academic course.) — ISBN 978-5-534-04171-2.

However, this regression model has its limits. In accordance with the UN concept of sustainable development, exponential population growth will constantly reduce the number of available resources per person under set production capacity. Consequently, the technological leap is a must but it will not happen instantly rather after adequate changes in all the elements of the system (people, capital, resources) are made. Hence, it is possible to predict that any further delay in the world GDP growth and investments and, vice versa, when the population growth reaches its peak, the technological leap will take place signifying a spiral transition to a new level of development according to Kondratiev long economic cycles¹.

This is why it is necessary to develop both TNCs and stakeholders associated with them. It will let them make this 'leap'. A similar leap has been subject to implementation in Russia with the help of the national technological initiative (NTI) carried out the agency of strategic initiatives under the President of the Russian Federation². However, efforts to implement the NTI are likely to be a response to external economic sanctions and attempts to reanimate the Russian industry predominantly based on the Soviet legacy. Thus, the attempts to implement nanotechnologies and modernization have started in the 1970s in the Soviet Union. When analyzing the media space of 2018, popular notions of modernization and nanotechnologies will be barely present in the periodical press or academic papers in comparison to 2007, even though their implementation was planned for a 10-20-year period.

Nowadays there is a whole variety of opinions on the notion of the TNC in both national and international literature. For example, E. A. Gryaznov argues that TNCs are an advanced organization type in a multinational corporation which appears at the moment of critical accumulation of industrial, financial and intellectual assets which subsequently are redistributed among two or more countries³. Let us cite an example, where a company possesses enough industrial assets in a particular country and further territorial expansion is not economically rational. In this case, a multinational corporation (supposedly employing international staff) redistributes its assets by making investments into the building industry or the industrial production first in neighboring countries and later in other continents⁴. The localization of production in the People's Republic of China is able to make any enterprise transnational based on technicalities.

¹ Kuznetsova G. V. International trade in goods and services in 2 parts Part 1. : tutorial and workshop for undergraduate and graduate / G. V. Kuznetsova, G. V. Podbiral. — 2nd ed.,rew. and add. — Moscow : Yurayt Publishing house, 2019. — 282 p. — (Series : Bachelor and master. Academic course.) — ISBN 978-5-534-04170-5.

² Agency for strategic initiatives. National technology initiative. — URL: <https://asi.ru/nti/> (accessed: 20.04.2019).

³ Petrova G. V. International financial law : textbook for undergraduate and graduate / G. V. Petrova. — Moscow : Yurayt Publishing House, 2019. — 441 p. — (Series : Bachelor and master. Academic course.) — ISBN 978-5-534-03066-2.

⁴ Boston Consulting Group. Tomorrow Never Dies: The Art of Staying on Top. — URL: <https://www.bcg.com/ru-ru/publications/2015/growth-innovation-tomorrow-never-dies-art-of-staying-on-top.aspx> (accessed: 20.04.2019).

As for the legal approach to TNCs appearing in the works of Schmigof and Rakhman¹, TNCs are social, economic and legal institutions featuring cross-shareholding within different jurisdictions. In such instance, referring a TNC to a competitive country happens at the place of share issue and registration, whereas the process of registration is conducted by local specialized registration companies. Holdings are a classic example of such a TNC. They are the most widespread organizational forms for both stock companies (Coca Cola) and family firms (IKEA). There are other examples of corporations of a similar legal type: concerns (Volkswagen, Gazprom), consortiums (General Electric, Siemens, Mitsubishi Electric), syndicates (BBC Radio International, Farmers Group Inc) and trusts (International Nickel Company of Canada – INCO, Unilever²).

The UN, namely, the UNCTAD gave the classic definition of TNC (although non-official). According to the definition, TNC features the following:

1. Includes units in two and more countries irrespective of legal forms and business areas;
2. Functions within the framework of decision-making system, which allows conducting an agreed policy and carrying out a shared strategy by one directing center or more;
3. Contains separate units which can have a significant influence on the other's function, in particular, share knowledge, resources, and responsibility with others³.

In the 21st century, the UN has corrected the definition by specifying that the minimal 10% threshold for controlling the company's share in the controlled companies' authorized capital. The classic definition of TNC is considered to be relevant for the research and corresponding to the monograph's specificity.

Having analyzed Russian and foreign works on international trade and relations between corporate forms of ownership, we can point out a number of key features in the TNCs' functioning which can be divided into two groups: quantitative and qualitative⁴. Quantitative features can be found and calculat-

¹ World economy and international economic relations : the textbook for bachelors and specialists / A. I. Pogorletskii [and others] ; under the editorship of A. I. Pogorletskii, S. F. Sutyurin. — Moscow : Yurayt Publishing House, 2019. — 499 p. — (Series : Bachelor and specialist). — ISBN 978-5-534-01336-8.

² Shimko P. D. World economy and international economic relations : textbook and workshop for bachelor, specialist and master degree / P. D. Shimko ; ed. I. A. Maksimtsev. — Moscow : Yurayt Publishing House, 2019. — 392 p. — (Series : Bachelor. Specialist. Master.) — ISBN 978-5-534-04145-3.

³ UN. Convention agreements. International development strategy for the third United Nations development Decade. — URL: https://www.un.org/ru/documents/decl_conv/conventions/dev_strategy_ch3ae.shtml (accessed: 20.04.2019).

⁴ Contemporary international relations : a tutorial and workshop for undergraduate academic / K. V. Belozarov [and others] ; under the editorship of K. V. Belozarov, M. Vasilyev, A. I. Pozdnyakov. — 2nd ed., rew. and add.— Moscow : Yurayt Publishing house, 2019. — 318 p. — (Series : Bachelor. Academic course.) — ISBN 978-5-534-09407-7.

ed in the corporation's financial, statistical and administrative reports¹. Qualitative features are defined by expert evaluation. The major features characterizing the TNCs' activity are provided in table 1.1 below².

Table 1.1. — Criteria for a company to be qualified as a TNC (compiled by the author)

Criterion	The value of the criterion
Quantitative features	
Profit margin	More than \$1 bln
Revenue	More than \$10 bln
Number of employees	10 thousand people
Number of nationalities in the staff	More than 2
The number of countries of localization	At least 2
Number of subsidiaries, branches and representative offices with production capacity	At least 3
The share of foreign capital in the turnover of the corporation	Not less than 25%
Share in the authorized capital of subsidiaries and affiliates abroad	Not less than 10%
Information Technology	Not less than 25%
Qualitative features	
Positions in key markets and degree of influence on consumers	Leading
Degree of influence on stakeholders	High
Decision-making system	Centralized
The organizational structure of management	Vertically integrated
Level of control of regulatory factors	1. International Business Standards Organization (priority) 2. National business standards
Degree of activity restrictions: by national authorities and international organizations	1. National – depending on the policy of protectionism 2. Supported in the framework of globalization and GVCs
Level of fame in the media	Arequent mention (news)
Number of subscribers in social networks (Twitter, Instagram, Facebook, etc.)	Not less than 1 mln

According to the Federal Act, there is a number of criteria which define corporations as TNCs in Russia. Besides, there is a precise definition of a multinational (transnational) corporation. There are special administrative districts, where TNCs' activity is referred to as the place of their localization (the Isle Russkii, Kaliningrad Oblast). In concordance with the Federal Act 292-FZ

¹ World economy and international economic relations : the textbook and workshop for academic undergraduate / V. V. Zubenko, O. V. Ignatova, N. L. Orlova, V. A. Zubenko. — Moscow : Yurayt Publishing House, 2019. — 409 p. — (Series : Bachelor. Academic course.) — ISBN 978-5-534-01021-3.

² The capital structure of corporations: theory and practice : monograph / under the editorship of I. V. Nikitochkina, S. G. Makarova.— Moscow : faculty of Economics, Moscow State University named after M. V. Lomonosov, 2014. — 112 p. — ISBN 978-5-9988-0264-5.

as of August 3, 2018, the notion 'personal law of the legal entity' was clarified in paragraph 3 of the article 1202 of the Civil Code of the Russian Federation¹. It was specified that the personal law of the legal entity is the right of a country where the legal entity was established unless contrary to provisions of applicable law and the Federal International Companies Act 290-FZ as of August 3, 2018².

In turn, this law defines the legal status of business companies with the status of an international company registered in the Unified State Register of Legal Entities (USRLE) due to a change in personal law in the procedure for replacing a legal address from one jurisdiction to another while maintaining organisational and legal status and corporate structure (redomiciliation), the rights and responsibilities of shareholders, the characteristics of their activities, and also in connection with the reorganisation or liquidation³.

Thus, according to the wording of the law, an international company is a foreign legal entity, a commercial corporate organization that has changed its personal law in accordance with the established legislative procedure.

Conditions of obtaining the status of an international company are as follows:

1. Belonging to a FATF (Financial Action Task Force on Money Laundering) member state or an observer state or a Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism – MONEYVAL member;
2. Conducting business on the territory of several states including Russia;
3. Investment commitments on the territory of the Russian Federation, with a minimum investment of 50 million rubles for a period of at least 6 months from the date of state registration of the international company;
4. The abbreviated company name of the international company in Russian should contain the full or abbreviated name of the international company and the abbreviation 'MK', and the abbreviation 'MKPAO' for public joint-stock companies.

The new law also regulates: the results of changes in personal law by foreign legal entities; features of state registration in the status of international companies and the acquisition of this public status by joint-stock companies; regulations on securities and other financial instruments; features of the registration of rights to shares; the procedure for termination of status without changing personal law, or changing personal law when changing jurisdiction.

¹ Consultant Plus. The Federal law "On modification of article 1202 of part three of the Civil code of the Russian Federation" of 03.08.2018 № 292-FZ (last edition). – URL: http://www.consultant.ru/document/cons_doc_LAW_304046/ (accessed: 20.04.2019).

² Consultant Plus. The Federal law "On international companies" dated 03.08.2018 № 290-FZ (latest version). – URL: http://www.consultant.ru/document/cons_doc_LAW_304052/ (accessed: 20.04.2019).

³ Consultant Plus. The Federal law "On state registration of legal entities and individual entrepreneurs" of 08.08.2001 № 129-FZ (latest version). – URL: http://www.consultant.ru/document/cons_doc_LAW_32881/ (accessed: 20.04.2019).

The features considered, of course, are not strictly regulated; as a rule, the classification of a corporation as a TNC is carried out according to compliance with a larger number of features from the above. Most often, a corporation is a transnational corporation, but it does not necessarily strictly comply with all the chosen criteria. The degree of compliance often depends on the organizational and legal form and the segment of activity. That is, it can be said that a TNC is 'more or less' transnational, depending on its type. For a better understanding of the nature of the types of corporations, let us characterize them in figure 1.4 below¹.

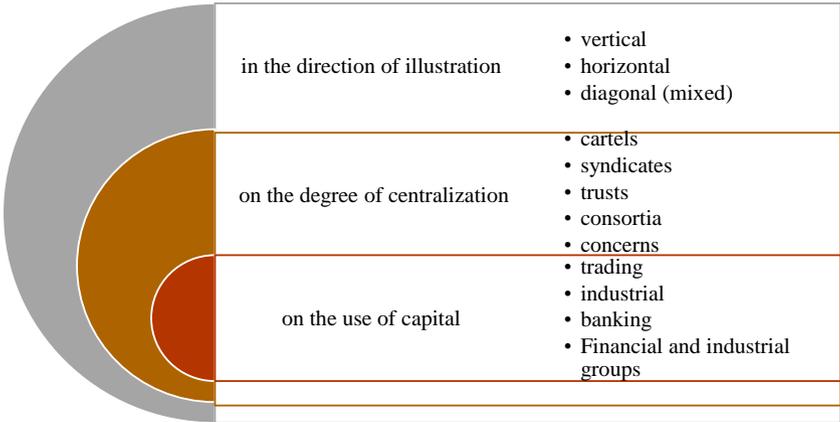


Figure 1.4. — Types of TNCs (compiled by the author)

According to the data from this figure, one can conclude that different types of TNCs react differently to the level of transnationalisation and are more oriented towards it². For example, vertically integrated corporations are more transnationalised than horizontal ones due to the peculiarities of the distribution of raw materials and end products. As for the degree of concentration, for example, trusts are less inclined to form transnational structures, due to the more rigid subordination of corporate units of the controlling company, which may conflict with the need for diversification within the framework of a corporate divisional structure. In general, TNCs at a high level of their development are inclined to give more freedom to their divisions, while observing a common corporate business policy of development strategy³. This is espe-

¹ Britannica. Multinational corporation. – URL: <https://www.britannica.com/topic/multinational-corporation> (accessed: 20.04.2019).

² Glosecki A. Open and closed corporations. The features of turnover share in the charter capital of limited liability companies: legal and economic aspects / A. A. Glosecki. — Moscow : STATUTE, 2017. — 192 p. — ISBN 978-5-8354-1394-2.

³ Boston Consulting Group. Measuring and managing corporate vitality. – URL: <https://www.bcg.com/ru-ru/publications/2017/strategy-strategic-planning-measuring-managing-corporate-vitality.aspx> (accessed: 20.04.2019).

cially evident in new business forms like franchising, outsourcing, outstaffing and the allocation of corporate, investment and venture funds for the implementation of priority and innovative projects. Let us consider the key features of the business transnationalisation under current conditions.

1.2. Transnationalisation as a new stage in the evolution of emerging countries

The effect of global value chains lies in the synergy effect due to which the value of a group of companies becomes greater than each of its divisions separately. Similar processes take place when functions are combined but in the opposite direction. In the global value chain, maintenance costs, functions combined into a unified system, on the contrary, decrease (figure 1.5).

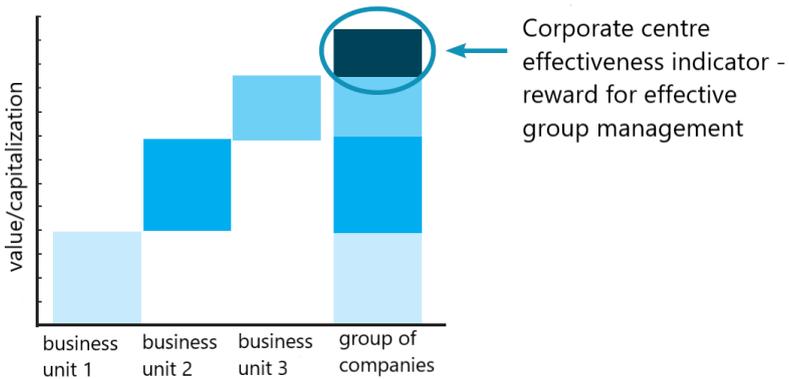


Figure 1.5. — Synergy effect of the TNC’s activity in comparison to other business units’ activity¹

This implies an important conclusion: the efficiency of TNCs depends on whether it brings additional income from the joint implementation of business projects or not. Should the answer be negative, the creation of GVCs, and therefore, the creation of TNCs in general, is not rational. In this regard, the efficiency of the corporation can be conditionally evaluated with Formula 1.1.

$$E = GC - BU, \tag{1.1}$$

where E - stands for the effect of the TNC’s activity;
 GC- means the value of the group of companies;
 BU - is the total value of the company’s business units.

¹ Key issues of group management / Dmitry Leikin. –M.: Alpina Publisher, 2017. — 312 c. – ISBN 978-5-9614-5744-5.

The E value must be above zero and it defines the criterion of economic efficiency of the TNC's creation and functionality within the GVC¹.

Similarly, the profit of TNC's administrative functions performance is calculated, however, in this case, the result must be below zero.

Let us explain in detail: TNC products go through a number of stages from creating a business idea to bringing it to world markets. These are research and development, experimental development, testing (especially important for medical treatments that are subject to many stages of clinical research), pilot production, small batch production, large batch production, market seizure and IPO expansion (as the final stage of recognition of the corporation's success on the market). All the above-listed stages require investments that are significant and more risky at the initial stages (venture capital financing) and less risky at the later stages (mezzanine financing²).

The main stages of the investment project life cycle, including entering new markets, are presented in figure 1.6.

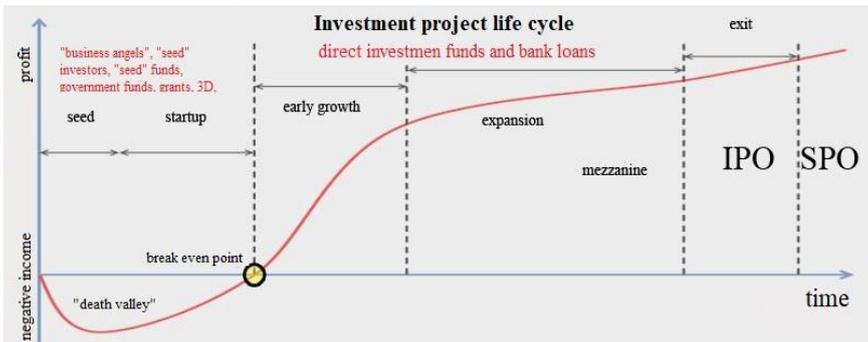


Figure 1.6. — Investment project life cycle when entering a new market³

Figure 1.6 shows that the largest share of investment comes at an early stage of the project and its payback depends on how quickly we can bring products to new emerging markets⁴. International relations imply the outsourcing of a significant part of the research functions to small and medium-sized innovative companies that are affiliated with the controlling company. In

¹ World.Lib. Development and interaction of domestic and international law in the context of globalization. — URL: http://world.lib.ru/o/orlowskij_a/tnk.shtml (accessed: 20.04.2019).

² Krasnostanova M. V. From the inventive team to the high-tech corporation: the human factor and the dynamics of the innovative project : textbook / M. V. Krasnostanova. — Moscow : Faculty of Economics, Moscow State University named after M. V. Lomonosov, 2014. — 88 p. — ISBN 978-5-9988-0270-6.

³ IT-management, project management, cloud technologies, software development. — URL: <https://dteplyakov.blogspot.com/2011/11/it.html> (accessed: 20.04.2019).

⁴ Gorbatkow S. A. Neural network and fuzzy simulation methods for diagnostics and prediction of bankruptcies of corporations : monograph / S. A. Gorbatkow S. A. Fargiev, I. I. Beloliptsev ; edited by Professor S. A. Gorbatkov. — Moscow : Publishing House "Prometey", 2018. — 371 p. — ISBN 978-5-907003-09-5.

this case, the greatest effect is achieved with the advanced processing of raw materials and resources. This is confirmed by the following factors: the price of chemical synthesis products (PVC, PET) is significantly higher than the price of petroleum products from which, in fact, they are produced, hence, the dependence is obvious. The greater the amount of processing, the higher the economic rent (income derived from value added). The value of this economic rent determines the level of competition on the relevant market and the number of companies on this market. The conclusion is that the economic rent, created in the value chain, under otherwise equal conditions is higher than the mining rent, derived from the simple extraction of resources (Figure 1.7).

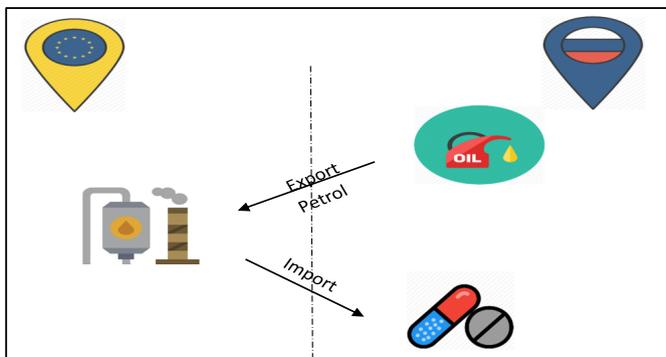


Figure 1.7. — The process of creating (or forming) value added as a result of export-import operations (compiled by the author)

As can be seen from figure 1.7, when the flows are ascending, the main part of the value added is formed outside the country. In contrast, when they are descending, most of the value added, and, consequently, state revenues, is formed within the country, due to the fact that foreign corporations localize their production in the country with the best investment attractiveness, credit regime, political and administrative conditions, socioeconomic climate, which are components of sustainable development. At the same time, not all the industries are in the same conditions, for example, the presence of foreign oil producing and refining companies in Russia (not considering their beneficiaries) is minimal (for example, foreign companies in the Russian Federation). And in the pharmaceuticals industry, it is the opposite (Teva, Abbott, Sanofi¹, etc.)

As a rule, countries do not use any particular type of international integration for a long time due to changes in the external economic and foreign policy situations, therefore, there can simultaneously be present foreign TNCs

¹ Miloslavskaya M. M. Aspects of improving the management system of diversified corporations : monograph / M. M. Miloslavskaya. — Moscow : Scientific consultant, 2014. — 87 p. — ISBN 978-5-9905698-7-4.

and the support of national producers in the same country (Russia and Brazil are not an exception¹). A strong imbalance in one direction or another is fraught with economic problems for the country; however, there are significant differences between these forms, so the governments have to maneuver between the interests of national producers and possible tax revenues from the presence of international TNCs in their countries. A classic example of such a bias is offshore zones (the Seychelles, Cyprus, Belize), where full priority is given to foreign TNCs due to a minimum and zero tax liabilities. An example of bias in the opposite direction can be nationalized economies (North Korea), which does not allow foreign corporations to enter their markets. Therefore, it is necessary to clarify the fundamental differences between these two forms of international integration (table 1.2)².

Table 1.2. — Comparative characteristics of approaches to the business internationalization (compiled by the author)

Characterized position	TNC localization	Development of national producers
Economic effect	<ul style="list-style-type: none"> - an increase in tax revenues - the transfer of foreign technologies to the country of localization -training employees in the sphere of advanced technologies 	<ul style="list-style-type: none"> - the creation of a full value-added a chain and, therefore, added income within the country - an increase in competitiveness of national business - development of national technologies and national markets
Hazard rates	<ul style="list-style-type: none"> -access to the socially significant industries (health care, military-industrial system, education) 	<ul style="list-style-type: none"> - excessive protectionism can create a prerequisite for a dishonest competition (competition of weak producers who will not strive for improving their businesses) -Artificial support of non-competitive enterprises only on the basis of their national belonging
Social effect	<ul style="list-style-type: none"> -creation of new jobs, charity initiatives - environmental protection and community support 	<ul style="list-style-type: none"> - maintaining employment in mono cities -creation of the possibility of job retraining in special economic zones

¹ Catmull E. Corporation of geniuses: How to manage a team of creative people / E. Cartmell, E. Wallace. — Moscow : Alpina Publisher, 2016. — 344 p. — ISBN 978-5-9614-4960-0.

² Miloslavskaya M. M. Strategies of development of diversified corporations in modern conditions : monograph / M. M. Miloslavskaya. — Moscow : Scientific consultant, 2014. — 50 p. — ISBN 978-5-9905698-5-0.

Continuation of Table 1.2

Technological trans	- import of specialists and equipment with the subsequent possibility of their employment at a national enterprise	-the accent placed on technologies included ones in the priority list, supported by the government; -the possibility of a farsighted and trendwatching in line with global trends (transferring the experience of advanced foreign countries onto the 'Russian soil', taking into account its socioeconomic peculiarities)
The time is given for the entry	Limited by administrative barriers, internal economic sanctions and customs quotas	Limited by the duration and timing of the implementation of state programs for the development of industries and territories

GVCs are a direct means of globalization, that is, the active transfer of technologies, human resources, information from one region to another. This process, like the first corporations, began in the era of colonialism - the active invasion of European countries into the territories of South America, Africa, and Asia. One of the first world corporations is the East India Company (Dutch corporation), which specialized in the import of spices from India and neighboring countries¹. Precisely at that moment, both the corporate form of ownership and shares (the rights for the ownership) appeared. Throughout the years of development, corporations have transformed into transnational during the third wave of globalization, when they acquired the main modern features that we know now².

In general terms, a corporation is a legal entity whose property is distributed among several other legal entities and which manages one or several types of activity³. Accordingly, we can say that the concept of a corporation is included in the concept of a legal entity. According to the Civil Code of the Russian Federation, Article 48, 'a legal entity is an organization that has separate property and is liable for its obligations, can acquire and exercise civil rights on its own behalf and bear civil obligations, be a plaintiff and a defendant in court'⁴.

However, 'legal entity' is a broader concept than the concept of a corporation. In turn, the notion of the joint-stock company as the main form of the corporation's activities in the world economy is an even narrower concept.

¹ Diletant. Honorable East India Company. – URL: <https://diletant.media/articles/36355214/> (accessed: 20.04.2019).

² Muravyov A. V. Transnational corporations: textbook / A.V. Muravyov. — Moscow : MSTU named after N. E. Bauman, 2014. – 120 p.

³ The Peoples' Friendship University of Russia. Legal regulation of the status of transnational corporations. – URL: http://web-local.rudn.ru/web-local/prep/rj/files.php?f=pf_333e84b2af05ff43d415e840973d2a21 (accessed: 20.04.2019).

⁴ Consultant Plus. "The civil code of the Russian Federation" of 30.11.1994 № 51-FZ (edition of 03.08.2018) (with changes and additions; entry. in force from 01.01.2009). – URL: http://www.consultant.ru/document/cons_doc_LAW_5142/ (accessed: 20.04.2019).

Therefore, it is necessary to differentiate between these terms. In the Russian Federation, a corporation is an entity that has a number of specific characteristics¹:

1. A legal entity must be registered in the Unified State Register of Legal Entities (Unified State Register) and have TIN, KPP, OGRN codes;

2. 'In accordance with the paragraph 1 of the article 65 of the Civil Code of the Russian Federation, corporate legal entities (corporations) are legal entities, where their founders (participants) have the right of participation (membership) in them and form their supreme body. In contrast to corporations, legal entities whose founders do not become their participants and do not acquire membership rights in them are called unitary';

3. The System of National Accounts 2008 (SNA 2008) provides an extensive definition of a corporation and the term 'corporation' is used in a wider sense than in a strictly legal². These are all units that:

- may gain profits or other financial benefits for their owners;
- are recognized by law as legal entities separate from their owners who have limited obligations;
- are established to participate in market production and are considered in the SNA as corporations, regardless of how they can characterize themselves and call themselves.

If a corporation is localized in one country and carries out its activity in other countries (including branches, representative offices), then the corporation can be classified as international or, in other words, transnational. TNC is a corporation that uses its capital in carrying out its activities on international markets. In this interpretation, the country of localization and the availability of production space abroad pale into insignificance, whereas both financial and intellectual capitals take the lead in cross-border operations. Stemming from this, in addition to the characteristics that are mandatory for any corporation, a number of additional features of TNCs can be distinguished³:

1. Involvement of international capital and foreign exchange transactions. That being said, the binding of capital to any state and nationality is not a priority. The priority is only the country of the jurisdiction where active operations involve this capital;

2. The financial and intellectual nature of business is becoming the leader in terms of profits in the era of the development of digital technologies in the economy, digital marketing in the field of online services; therefore, we can see the trend of gradual transformation of a classic industrial corporation

¹ Consultant Plus. "OK 028-2012. All-Russian classifier of organizational and legal forms" (app. Order Rosstandart of 16.10.2012 № 505-St) (ed. by 24.10.2018) (together with the "notes to position OKOPF"). – URL: http://www.consultant.ru/document/cons_doc_LAW_139192/ (accessed: 20.04.2019).

² UN. System of national accounts 2008. – URL: <https://unstats.un.org/unsd/nationalaccount/docs/SNA2008Russian.pdf> (accessed: 20.04.2019).

³ Ponomareva T.N. The legal status of a commercial organization as a corporation : textbook / T. N. Ponomareva. — Vologda : Vogtu, 2014. – 76 p. – ISBN 978-5-87822-543-4.

with factories around the world into a virtual corporation. The core of the business is online business operations. To a certain extent, this complicates the process of determining the nationality of TNCs, which is why according to the international law, TNCs pay taxes at the place of localization of the headquarters. In particular, this leads to the emergence of an offshore zone, where the main income is based on the resources provided by the TNC for its development;

3. Another important problem of TNCs is the complex, branched, and often closed structure of final beneficiaries. This problem is also indicative of national corporations, but its scale became this large for the first time precisely on the international scene. In this regard, the results of the activities of international commercial organizations are worth mentioning: Transparency International regularly publishes reports on the transparency level in international corporations¹;

4. A number of researchers note that working for the benefit of the international community, including international staff is a very distinctive feature of TNCs, as opposed to national companies working for the benefit of a separate state or an individual nation. In this regard, it should be mentioned that TNCs are much closer in adopting the philosophy of sustainable development than individual enterprises or national corporations; hence, TNC is a corporation working for the good of the world. In most cases, TNCs appear under conditions of a critical concentration of capital on the national market, and therefore, in search of a sales market, national corporations switch to other countries' markets and thus, become transnational;

5. It is interesting to note that in the international legislation (as in the Russian norms) there is no normatively approved definition of TNCs (laws are limited to the definition of 'corporation'). This happens due to the fact that, unlike national corporations, TNCs can change their location and relatively they can change their national identity². This means that if a country's, for example, the level of taxation does not suit TNCs, international norms allow them to change its jurisdiction. That is why, for the purposes of further research, if this does not create contradictions, we will identify the concepts of a corporation and a TNC (as well as their features). Features of a corporation as a more aggregated concept totally comply with the ones of TNCs, however, the international business community identifies a number of specific criteria by which MNCs can be distinguished from TNCs. These differences are presented in figure 1.8.

¹ Transparency International. Transparency of corporate reporting. – URL: <https://transparency.org.ru/research/v-rossii/prozrachnost-korporativnoy-otchetnosti-transperensi-otsenila-prozrachnost-krupneyshikh-rossiyskikh-kompaniy-na-2-6-iz-10.html> (accessed: 20.04.2019).

² Tekutiev D. I. The legal mechanism of increase of efficiency of activity of members of the management bodies of the corporation : monograph / D. I. Tekutjev. — Moscow : STATUTE, 2017. — 176 p. — ISBN 978-5-8354-1319-5.



- Multinational companies own a home company and its subsidiaries.
- Multinational Companies have a centralized management system.
- Multinational companies will face a barrier in decision making due to its centralized management system.



- Transnational companies do not have subsidiaries but just many companies.
- Transnational companies do not have a centralized management system
- Transnational companies are able to gain more interest in the local markets since they maintain their own systems.

Figure 1.8. — Differences between MNCs and TNCs¹

6. Another important feature of TNCs is the presence of developed divisional organizational structures, which is due to their inclinations towards working on the markets of various countries and continents². For example, if a company from France plans to develop in Hong Kong, sooner or later, it will need to improve its organizational structure (usually linear-functional) into a divisional one (see the figure 1.9 below³).

¹ Redsearch. Multinational corporations meaning. — URL: https://redsearch.org/images/p/multinational_corporations_meaning (accessed: 20.04.2019).

² Fomina O. N. Legal status of business Corporation in the USA and joint stock company in the Russian Federation: comparative legal analysis : monograph / O. N. Fomina. — Moscow : STAT-UTE, 2016. — 160 p. — ISBN 978-5-8354-1281-5.

³ Romachkin T.V. Formation and development of TNCs in the context of globalization. — Saratov: publishing center "Science", 2016. — 160 p.

CEO

The Director of the division A

- Director of production in the country A
- Director of sales in the country A
- Director of procurement in the country A
- PR Director in country A

The Director of the division B

- Director of production in the country B
- Director of sales in the country B
- Director of procurement in the country B
- PR Director in country B

Figure 1.9. — Company’s organizational structure (compiled by the author)

In addition to this, TNCs are well adapted for organization matrixes. The experience of the Pixar and Google shows that the opportunities of distributed management in TNCs are higher, which makes it possible to effectively implement the ideas of “creative management”, “offices without superiors” and “brainstorming”, while the risks of TNCs’ activities are also higher than natural risks. Apart from organizational risks associated with managing a complex organizational structure, there is a number of other risks which are very representative of TNCs. These are financial risks associated with changes in the global currency picture, production risks associated with a huge number of suppliers, contractors and customers, personnel risks associated with different levels of education, income, cultural development, administrative risks associated with the different investment climate and conditions of business management, environmental, etc. In the following, we will examine specific examples of TNCs in developed and developing countries¹.

1.3. Place and role of TNCs in the economies of developing countries and countries with economies in transition

Currently, there is no single approach to the division of countries into underdeveloped countries, developing and developed ones. There are more common approaches of the UN, World Bank, WTO to ranking countries and territories. Despite the fact that the current stages of development of TNCs are characterized by globalization and the flow of capital from one area to an-

¹ UN. Transnational corporation and export competitiveness. – URL: <https://www.un.org/ru/development/surveys/docs/investments2002.pdf> (accessed: 20.04.2019).

other, (which in theory should level the gap between countries) and the development of national economies is still uneven. For many reasons, because of the policy of protectionism, many because of the different levels of natural resources (as the main factor of economic growth).

At present, countries are graded by level of development mainly on economic grounds: level of consumption, level of per capita income, potential and real GDP. However, there are no clear boundaries between one and another level. This is large because the level of development of the country is something more than just its economy. For example, the presence of a large number of natural resources, but the concentration of them in the hands of a narrow stratum of the population does not actually make the country truly developed although the indicators of economic activity will be at a high level. This shows the imperfection of using only economic values, especially averages. In this regard, social and environmental factors are of particular importance. That is why currently popular indicators such as the human capital development index, the quality of life index, happiness index, characterizing the non-financial aspects of life in the country.

In General, this classification dates back to the era of colonialism, according to which the dominions belonging to the developed countries, the colony countries to the developing countries, and the countries not involved in either the first or the second - to underdeveloped countries. However, we believe that a more correct classification in modern conditions should be based on the degree of raw material processing in the ascending and descending flows of the global value chain. In this regard, we can say with confidence that economies in underdeveloped countries are based on the use of agriculture (agricultural countries), developing countries of the lowest type, for example - on the use of natural resources, developing countries of the highest type - on the processing of the natural resources, the most developed countries are based on the use of IT technologies. Let us consider the main approaches to the classification of countries, which are presented in table 1.3¹².

Table 1.3. — Classification of countries by level of development for 2019 (compiled by the author)

Organization	Country
Developed countries	
United Nations organization	New Zealand, Singapore, Hong Kong SAR (China)
International Monetary Fund	New Zealand, Singapore, Hong Kong SAR (China)
World Bank	New Zealand, Singapore, Hong Kong SAR (China)
Developing countries	
United Nations organization	India, Brazil, Israel
International Monetary Fund	Russia, Turkey, Armenia
World Bank	China, Republic of South Africa, Malaysia

¹ International Monetary Fund. World Economic Outlook. – URL: <https://www.imf.org/en/Publications/WEO> (accessed: 20.04.2019).

² The World Bank. World Bank Country and Lending Groups. – URL: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519#High_income (accessed: 20.04.2019).

Underdeveloped countries	
United Nations organization	Congo (Dem. Rep), Somalia, Eritrea
International Monetary Fund	Congo (Dem. Rep), Somalia, Eritrea
World Bank	Congo (Dem. Rep), Somalia, Eritrea

The division of countries according to the level of development is carried out in different international organizations on a territorial basis as well¹. This is due, firstly, to the historical features of the activities of these organizations, secondly, the influence degree of the countries in an international organization and thirdly, the line of activities of international organizations (whether it is more focused on Asia, Europe or America)². However, regardless of the classification, the level of development as a whole is determined by economic factors: the classification of countries into a group usually affects their investment and credit rating (countries also have credit ratings as companies). The level of development of the country is also affected by the presence of TNCs, the level of foreign direct investment in the economy, as well as the degree of transnationalization of national economies compared to competitors. The main criteria on the basis of which countries belong to a particular group include the following:

1. Economic: the level of taxation, administrative barriers, the indicator characterizing the system of national accounts (GDP per capita, GNP, IRR, national saving etc.), the level of national investment (including direct), the consumer purchasing power, the inflation rate, the availability and accessibility of natural resources, a developed system of service industry, the unemployment rate and labor market regulation, the level of development of the banking sector and the accessibility of credit resources, the degree of liberalization – protectionism (Figure 1.10).

2. Infrastructural: the level of availability of electricity (water), fuel energy, transport accessibility, access to the Internet, logistics and material support.

3. Social: the education system development, the level of democratic freedoms and the degree of openness of the market, health level, level of education, the degree of mandatory execution of the contract (including social), protection of the ecological environment, the development of social institutions (judiciary), the level of business protection. To characterize the level of doing business in the country and therefore classify it as one of the selected groups, we will use the methodology of the World Bank on the basis of which we will conduct an inter-price study using the selected parameters: GDP (current US\$), GNI per capita, Atlas method (current US\$).

¹ Central Intelligence Agency. The world factbook. – URL: <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html> (accessed: 20.04.2019).

² UN. Standard Country or Area Codes for Statistical Use. – URL: <https://unstats.un.org/unsd/methodology/m49/> (accessed: 20.04.2019).

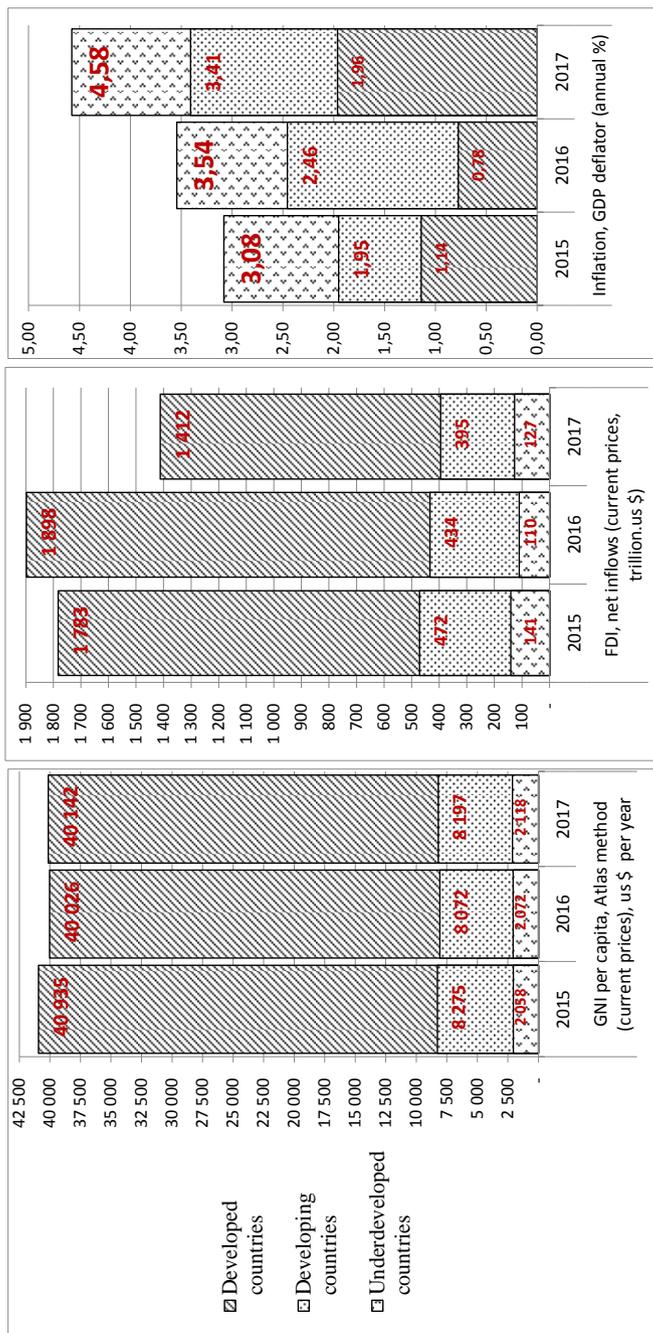


Figure 1.10. — Comparative characteristics of TNC activity on economic aspects of activity (2015-2017)
(compiled by the author)¹

¹ The World Bank. DataBank. — URL: <https://databank.worldbank.org/data/source/world-development-indicators#> (accessed: 20.04.2019).

The methodology of the World Bank provides the ability to operate with data of both individual countries and entire territorial and territorial-economic complexes in order to objectively reflect the differences between developed, developing and underdeveloped countries. For this analysis, we selected a group of countries with high income -to characterize developed economies, countries with middle to middle-high income level to characterize the developing countries and countries with low income as a characteristic of underdeveloped countries. This classification is quite objective since it is the level of income that underlies the division of countries and economies.

As can be seen from the above figure, to date, the situation with the level of transnationalization of business and quality of life in the world varies significantly, which certainly contributes to the growth of social tension. Pay attention to the gap in per capita income in developed and underdeveloped countries - it differs by more than 20 times! This is primarily due to the high cost of labor and labor force for the citizens of developed countries. In addition, the development of judicial, administrative and tax systems contribute to increasing investors' confidence in companies from these countries. Needless to say, if the Startup of the "third world" country company has almost no chance to enter the international arena!

The active development of the business of the "Golden billion" creates a situation where 90% of the world's wealth and resources in one way or another are in the hands of 10% of the world's population. Therefore, the business environment in developed countries is such that rich enterprises become richer and poor companies become poorer. So middle-income countries tend to gravitate more towards developed than underdeveloped countries in terms of their performance. Indicators of foreign direct investment in the economy can illustrate this. It can be seen that the difference between developing (transitional) countries and underdeveloped is more than 6 times, and the gap with developed countries is about 2.5-3 times.

A similar situation is observed with inflation indicators but in the opposite direction. One of the main indicators of a developed economy is a consistently low level of inflation (for developed countries it is up to 2% per year, when as for underdeveloped countries it is usually more than 4%, and since the data are average for a group of low-income countries, they do not reflect that in some African countries inflation can be even more than 20-30%, which is considered unsatisfactory for the economy). In General, developing countries seek to give TNCs as much access to national resources and Finance as possible, in exchange for advanced technologies, when, in developed countries, such technologies already exist and corporations compete at a higher level than simply for natural resources.

Such a gap is observed not only in the terms under consideration but also in other indicators of the economic sphere of activity. In particular, the volume of GDP in real and value terms in developed countries is also much higher: similar to the total number of enterprises, total income, value added in the global value chain, etc. Let us consider the comparative characteristics of infrastructure and social indicators, which are presented in tables 1.4 and 1.5.

Table 1.4. — Comparative characteristics of TNC activity on infrastructure aspects of activity (2014-2018)¹ (compiled by the author)

	The time required to start a business (days)		
	2016	2017	2018
Underdeveloped countries	32,0	28,5	26,4
Developing countries	23,9	23,7	22,5
Developed countries	12,1	11,5	11,0
	Tax revenues (% of GDP)		
	2014	2015	2016
Developed countries	15,3	15,3	15,3
Underdeveloped countries	12,2	11,9	11,7
Developing countries	12,0	11,7	11,5
	Domestic credit provided by the financial sector (% of GDP)		
	2014	2015	2016
Developed countries	203,9	199,5	206,0
Developing countries	120,4	143,8	158,7
Underdeveloped countries	60,5	63,0	66,6

As can be seen from the table, the conditions for starting and doing business Startup in developed countries is about 2 times better than in the rest.

This is due to the duration of licensing procedures, the number of necessary documents and the level of digitization of state and municipal government. It is believed that the best condition for starting a business provides Estonia and Iceland, where your official business can be started in less than a week. The General trend is that the less developed the economy, the longer the time needed to open a business. This is largely due to the level of corruption while making such decisions. It is believed that the Scandinavian countries are the countries with the lowest level of corruption; Russia is still in the lower half of the list, which does not allow attracting serious investors with serious intentions.²

In turn, tax policy in developed countries shows the opposite trend: countries with developed economies have more stringent tax legislation and the level of the tax burden is higher than in other countries. One of the most illustrative examples is the tax system of the Scandinavian countries and the United States, where individuals can give up to 40-50 % of their income, and legal body - up to 70% for tax payments. This system is considered to be more effective, as by means of active tax payments the speed of money supply turnover increases, which in turn leads to the increased funding for citizens and businesses.

¹ The World Bank. DataBank. – URL: <https://databank.worldbank.org/data/source/world-development-indicators#> (accessed: 20.04.2019).

² Transparency International. Corruption Perceptions Index 2018. – URL: <https://www.transparency.org/cpi2018> (accessed: 20.04.2019).

In turn, high velocity of circulation of finance and as a result, the high rate of properties turnover leads to the possibility of improving the ability of credit resources and, indeed, if in your business the rate of money turnover is high, you have more opportunities to take the borrowed funds and as a consequence, a longer shoulder the financial leverage.

From the point of view of the economy, the developed countries, of course, are above the rest, but there is one interesting paradox that considering such indicators as the population, the birth rate, the average number of children in the family, less developed countries are above the developed ones. It is surprising that having such a large number of people they can not convert quantity into quality. Therefore, describing the social indicators, it should be noted that although the expected lifespan in developed countries (more than 80 years) is significantly ahead of underdeveloped countries (about 50 years), they compensate for this lack of high fertility, although mortality is also (as a result of the weak development of medicine) is high, while the total population attributable to underdeveloped countries is much lower (hence the problems of migration crises, social revolutions and conflicts that occur in these countries) (table 1.5).

Table 1.5. — Comparative characteristics of TNC activity on social aspects of activity (2014-2017) (compiled by the author)¹

	Life expectancy at birth, total years		
	2014	2015	2016
Developed countries	80,4	80,3	80,4
Developing countries	74,9	75,1	75,3
Underdeveloped countries	67,4	67,6	67,9
	Urban population growth (annual percentage)		
	2015	2016	2017
Underdeveloped countries	2,6	2,6	2,6
Developing countries	2,2	2,1	2,1
Developed countries	0,8	0,8	0,8
	Childbearing rate, total (number of births per woman)		
	2014	2015	2016
Underdeveloped countries	2,8	2,7	2,7
Developing countries	1,8	1,8	1,8
Developed countries	1,7	1,7	1,7

Social indicator of the Corporation and the economy is the basis for determining the level of human capital. By human capital we mean: first, a set of knowledge, skills and abilities of employees of the Corporation, and secondly, the existing human potential -a potential opportunity to improve their hard skills and soft skills, and thirdly, the interconnectedness and interdependence of the

¹ The World Bank. DataBank. — URL: <https://databank.worldbank.org/data/source/world-development-indicators#> (accessed: 20.04.2019).

human environment with the technical and economic environment, providing an opportunity to improve the quality of key indicators of the Corporation.

There are several ways to measure the level of human capital: the simplest is to calculate the additional economic effect that employees bring to the Corporation because of the use of human capital by 100%. Another way is to consider human capital through the social aspects of the activity, all other things being equal, it is believed that employees with higher motivation, better health, greater interest in their work will invest their human resources more effectively and improve the quality of management in the enterprise.

One of the main indicators of human capital is life expectancy and, directly related to it, the duration of active working age. These indicators interact with the pension systems of the state and implemented private and public programs for persons of pre-retirement and retirement age, for example: "Moscow longevity" - a program aimed at creating a startup among pensioners and teaching them the basics of entrepreneurship. Therefore, in developed countries, life expectancy during the period when an employee can generate income for his Corporation and his state is consistently higher on average. Many corporations implement the approach when after retirement age employees do not leave the company, and occupy the positions of business consultants, implement their considerable experience.

It is representative that life expectancy in such developed countries as Japan, Norway, Switzerland is on average higher (more than 80 years) than in countries with economies in transition (Russia, Brazil) on average more than 70 years and much higher than in underdeveloped countries (in some poorest countries 40 years is already considered the old age - Somalia, Eritrea, Western Sahara).

Life expectancy indicators are directly related to the birth rate and this is natural because the economies with low income and low living standards are trying to compensate for their lag due to the high birth rate, but at the same time due to the underdevelopment of medicine, there is a high mortality rate (including child mortality). In developed countries, 1 - 2 children is considered the norm, as the economic support of the state and parents and medicine can guarantee their well-being and quality of life. The economic doctrine of developed countries provides that the state, and sometimes corporations, assume the main burden of care about families when, as in underdeveloped countries, children become a pillar of family well-being – when the state is not in a position to do so.

For the above reasons, there are differences in social indicators between developed and underdeveloped countries.

In addition, it should be noted that developed, developing and underdeveloped countries also differ in the number of registered corporations, as well as small and medium-sized businesses. For developed countries, the norm is the share of small and medium-sized enterprises (SMEs) to 70-80% of GDP. Let us compare this figure with the Russian economy, and we will see that the share of state monopolies is, on the contrary, up to 80% in the national budget. The same is true for the number of registered legal entities. In the US, which is the largest economy in the world, only legal entities registered more

than half a million corporate property standards, not to mention small non-corporate organizations. These statistics are directly related to the economic, infrastructure, and even social aspects, as American pensioners with a lot of free time and money often open their small business, which also makes its contribution to the national economy.

Thus, we see that all 3 groups of indicators are related to each other and determine the logic of the economy of TNCs in developed countries. Unfortunately, the process of merging national economies and leveling the quality and standard of living in different countries is extremely slow. Therefore, we hope that our proposal, dedicated to the growth of transnationalization in the markets of Brazil and Russia, will help to increase not only economic but also social efficiency of the business in the regions under consideration.

One of the most striking examples illustrating the concept of the relationship of these indicators is the experience of Siemens (production of electronics and railway transport). In early 2018, Siemens offered the French locomotive manufacturer Alcon mutually beneficial cooperation on the mutual purchase of shares, that is, the German company buys shares of the French, and the French, in turn, buys the German shares. This would make it possible to create the largest European railway Alliance and take a privileged market share, with the corresponding creation of jobs, tax increases, high value-added and other benefits for the infrastructure, economic and social sphere.

However, the European Antimonopoly Agency refused to enter into such a transaction, arguing that it would create a restriction for the largest Chinese manufacturer of railway transport. Note that both European companies protect the rights of the European Union, but the requirement of Antimonopoly legislation is higher than the economic interests of the whole region. In the practice of a country with developed corporate legislation, many cases can be found where even positive prospects for the localization of TNCs have been limited by the interests of local communities.

In American practice, one of the clearest examples are reservations - special economic territories in which the indigenous peoples of America (Navajo, etc.) live, where the activities of companies not owned by Navajo are prohibited. Moreover, even if in the surrounding area this activity is prohibited, for the Navajo Indian company, this activity will be allowed (for example, a gambling establishment (Casino) in reservations).

In Russian practice, such restrictions have been developed in the form of external economic sanctions with the EU and the US, as a result of which companies that are not localized on the territory of the Russian Federation have received a ban on the import of their goods from abroad. This was especially true of engineering (equipment for oil refining, chemical industry, etc.), the military-industrial complex and food industry. These restrictions are largely related to the level of imports in the national markets of the countries concerned. In Russia, the share of imported machinery is 90-95%, chemical industry 70-80%, pharmaceutical industry 60-70%, food about 50%. That is why restrictive measures "hurt the most" in these industries.

Full indicators of the performance of developed, developing and transition economies from 1990 to the present time are presented in Appendix №1.

After analyzing the presented figures, you can clearly see the differences between developed, developing and underdeveloped countries, this is due, firstly, to the varying degree of involvement in the global value chain, secondly, the level of protectionism, and thirdly, the development of national business. However, it should be noted that for the purposes of this analysis, the approved data for the appropriate groups of countries were used. The Atlas conversion method was used to eliminate the side effects of the exchange rate, especially for the period of 3 years. The essence of this method consists, firstly, in the use of the average, not the moment exchange rate (for the previous 2 years), and secondly, the adjustment of the exchange rate at the level of inflation, taking into account its difference with the inflation of the big 5 countries (G-5: France, Germany, UK, Japan, USA).

To account the impact of inflation on economic parameters, the GDP deflator is used, which is actually the ratio between nominal and real GDP. As you know, positive inflation reduces real GDP in relation to nominal GDP. Similarly, inflation affects the exchange rate: positive inflation reduces the real exchange value of money. Based on this, the conversion rate of the Atlas can be represented as a Formula 1.2.¹:

$$CRa = \frac{Ex}{I - IG5}, \quad (1.2)$$

where CRa – a conversion rate of the Atlas;

Ex – average exchange rate for 2 years;

I – inflation rate in the country I selected;

I G5 – inflation rate in the G-5 countries.

Basically, the conversion rate is used when the exchange rate is weak or extremely subject to changes in relation to the world's leading currencies (euros, dollars, etc). In turn, the GDP deflator is calculated by Formula 1.3:²

$$Q = \frac{GDPn}{GDPr}, \quad (1.3)$$

where Q – deflator index;

GDPn - nominal GDP;

GDPr - real GDP.

¹ The World Bank. World Bank Atlas method. – URL: <https://web.archive.org/web/20160303202552/http://econ.worldbank.org/WBSITE/EXTERNAL/DATASTATIS-TICS/0,,contentMDK:20452009~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html> (accessed: 20.04.2019).

² The World Bank. World Bank Atlas method. – URL: <https://web.archive.org/web/20160303202552/http://econ.worldbank.org/WBSITE/EXTERNAL/DATASTATIS-TICS/0,,contentMDK:20452009~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html> (accessed: 20.04.2019).

Let us consider the key differences between the business environment of TNCs in developed and underdeveloped countries. We deliberately do not consider developing countries, as they are close to developed countries in terms of their conditions. The principal difference between the business environment in developed and underdeveloped countries is the degree of influence of TNCs on the national economy and national business table 1.6.

Table 1.6. — The key differences developed countries and underdeveloped countries by sector (compiled by the author)

Area (aspects)	Developed countries	Underdeveloped countries
Level of access and barriers to entry the market	Full access to the national market	The dominant "eagles" TNCs in the economy
The banking-credit sector	Low cost of credit	Low-interest rates on loans for TNCs
Tax sphere	High level of the tax burden	Preferential or offshore taxation
Availability of natural and other resources	Full and free access to fuel and energy resources	Full access and even capture of local natural resources
Regulatory-administrative sphere	High level of administrative regulation	The high degree of lobbying in national legislatures
Sphere of the system of national accounts	Lack of dominance in GDP (most of the burden falls on small businesses)	System-forming role of TNCs in the formation of national GDP
The infrastructure sector	Creation of additional infrastructure services through the use of subcontractors	Lack of dominance in GDP (most of the burden falls on small businesses)

No matter what country we consider any company carries out its activities on the stability curve and the risk curve characterizes the level of internal and external threats to the company. At the seed stage, the risks are maximized as is the maximum possible initial investment. In the next stages of early growth and expansion, risks gradually reduce to a minimum level and then begin to grow again increasing to a medium-high level. At the mezzanine and IPO stages, the opportunities for further development are due to the company's exit from the stability zone and its transition to a new level, within which the secondary public offering stage is possible, as well as an additional issue of shares and their issue from the lender. The General dynamics of the level of development and risks of TNCs in the process of investment risk are presented in figure 1.11.

As can be seen from this figure, in fact, countries and TNCs are essentially the "black boxes" of the economy at the entrance, which has raw materials, and the output of finished products. Due to the fact that the systems under consideration are fundamentally open, their mandatory element is the ac-

counting of market signals to the input and output flows, as well as the construction of the inverse relationship circuit with subsequent corrective action. Any system consists of many elements, for the considered, the main subsystems are labor (people-staff), material (equipment, transport, building), resources (raw materials, semi-finished products, intellectual property, etc.).

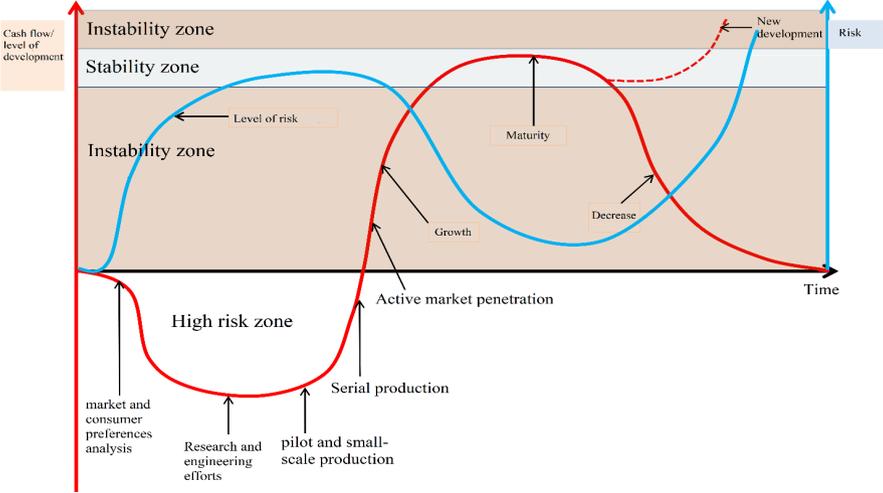


Figure 1.11. — General dynamics of development and risks of TNCs in the process of investment risk (compiled by the author)

The key conclusion and idea of this figure is as follows: revolutionary (abrupt growth), that is, an abrupt (instantaneous) transition to a new level of development is fundamentally impossible without a critical accumulation of innovation and qualification level in each of the systems, and not only in one of them. Therefore, it is not possible to talk about the improvement of human capital or a financial Corporation in isolation from its production and technological and organizational and managerial level, the potential of which must first be measured (evaluated) before any process of innovation. For the purposes of this monograph, despite the fact that the improvement of the Corporation is expected in the financial key, from the perspective of the world economy, the consideration of this topic will be incomplete and will not have sufficient scientific novelty and practical feasibility without adequate consideration of other aspects of the Corporation, at least in a concise form.

We would also like to mention that all these processes that determine the differences in developed, developing and underdeveloped countries from each other are caused by processes of transnationalization. Transnationalization is a flow of capital from regions and companies where they are present in excessive quantities in countries and companies where there is a lack of vari-

ous forms of capital. This process allows more efficient use of existing factors of production. There are the following types of transnationalization:

1. corporate - represents an increase in the role of TNCs in the international economy;
2. economic - represents an increase in the role of TNCs in the economic and international activities of countries and regions. In this consideration, economic transnationalization appears to be a more mature stage in the internationalization and development of the global value chain.

There are the following theories of business transnationalization, most of them are aimed at studying foreign direct investment (FDI) in the economy. It is believed that a large part of FDI is either corporate (private) or unitary (state-owned) TNCs. Such theories first emerged in the 50s and 60s of the 20th century and sought to explain the abrupt increase in FDI and the share of TNCs in world GDP. The development of scientific schools of transnationalization by the end of the 20th century led to the development of several scientific schools (theories).

1. J. Dunning theory (electrical theory)¹
2. S. Hymer and Ch.P. Kindleberger theory (transnational companies and imperfect competition)²
3. R. Vernon theory (life cycle of TNCs)³
4. H. Kojima и T. Ozawa theory (flying geese paradigm)⁴
5. J. Johansson theory (internationalization theory)⁵

Most of the theories are based on the analysis of factual material about the activities of TNCs in the world from the 1950s to the present. Given the fact that in developing countries the share of TNCs starts to rise, the actual features of activities often differ from practice activities in the USA and Western Europe. Because of this major trend at the beginning of the 21st century is the study of the theory and practice of TNCs in developing countries and countries with economies in transition. Brazil and Russia, as in our study, belong to such countries. To quantify the level of impact of TNCs on local businesses and the economy in general, we use the index of transnationalization.

The transnationality index is mainly used for three types of TNCs:

1. horizontally integrated - TNCs that produce identical or similar products;
2. vertically integrated - TNCs that combines the entire production chain in a GVC (from the purchase of raw materials to the sale of finished products);

¹ Dunning John. Toward an Eclectic Theory of International Production: Some Empirical Tests // Journal of International Business Studies. – 1979. - №11 (1) - p. 9–31.

² Massachusetts Institute of Technology, Essays in the theory of international capital movements. – URL: <https://dspace.mit.edu/handle/1721.1/12132#files-area> (accessed: 20.04.2019).

³ Vernon Raymond. International Investment and International Trade in the Product Cycle // Quarterly Journal of Economics. -1966 - №80 (2) - p.190–207.

⁴ Infeconomy. Paradigm of "flying geese». – URL: <http://www.infeconomy.ru/ininv/970--l-r.html> (accessed: 20.04.2019).

⁵ UNCTAD. Transnational corporations. – URL: https://unctad.org/en/docs/iteit12v8n2_en.pdf (accessed: 20.04.2019).

3. separate TNCs (diversified) - TNCs whose units are not connected by production, the units remain independent, while the headquarters performs the functions of a strategic regulator.

To properly understand the impact of TNCs on the economy, it should be noted that they can exist in the main organizational and legal forms: U-forms, D-forms, H-forms, M-forms, and even X-forms. Each of these forms determines the degree of influence and subordination of the company's division relative to Central management. Currently, the most common form is D (from the word divisional) in which the value of the transnationality index will be the most significant.

Speaking about the transnationalization index, it should be noted that it can exist in two main forms (figure 1.12).

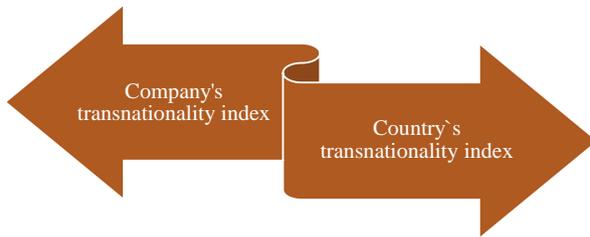


Figure 1.12. — Two main forms of the transnationalization index (compiled by the author)

The company's transnationality index shows the extent to which TNCs are involved in the production of products and services in a country other than the country of headquarters. As an example, the customs rules for determining the countries of origin of the goods, which determine what customs duties and quotas will be used in relation to the products depending on the country in which it was produced – this becomes relevant when the products go through many stages of processing in different countries. Suppose, for example, drug substances were purchased from Pakistan, mixed in China, packaged in Russia, but all the equipment is manufactured in Austria (blister card and plastic are Austrian, the tablet is Pakistani, and the substance is Chinese, but packaged in Russia). The question arises – what country of origin are the pills? Especially if these works were made under the contract with the Indian pharmaceutical Corporation.

Of course, the basis for the countries themselves will be spelled out in the contract, but according to international rules, which are higher than the normative level of the contract between individual companies, the country of origin will be the country where more than 50% of the added value of the product is produced. To regulate these relations of TNCs in international trade, there is a FEACN- commodity nomenclature of foreign economic activity and Incoterms – determining the moment of transfer of risk liability and payments from one counterparty to another.

To determine the Transnationality index it is necessary to know three indicators:

1. the ratio of the total value of property abroad to the total value of assets in the Corporation (the share of foreign assets);
2. the ratio of revenue received abroad to total revenue of TNCs (share of foreign sales);
3. the ratio of personnel abroad (in subsidiaries, branches, and representative offices) to the total number of employees in the Corporation (the share of foreign personnel).

General formula 1.4 for calculating the transnationality index of TNCs will be¹:

$$\frac{\left(\frac{Af}{At} + \frac{Bf}{Bt} + \frac{Pf}{Pt}\right)}{3} = \text{TNI}, \quad (1.4)$$

where TNI - transnationality index of a company;

Af- foreign assets of TNC, At - total assets of TNC;

Bf – foreign revenue of TNC, Bt - total revenue of TNC;

Pf- foreign personnel of TNC, Pt - total number of employees of TNC.

The maximum value of this index can be 1 (100%), the closer this indicator is to 1, the more this company meets the characteristics of TNCs. Accordingly, the closer the index to 0 - the less the company meets the status of TNCs.

The transnationality index of a country – actually this indicator characterizes the level of influence of TNCs on the economy of the country or region in consideration. To calculate the transnationalization of the country we need to know the following metrics: level of FDI and its share in the total investment of the country; level of GDP of the country; the share of TNCs` branches in the volume of production in natural and cost expression; percentage of employment in TNCs of total employment in the country.

Therefore, the transnationality index of the country will be calculated as follows (Formula 1.5):

$$\frac{\frac{FDI + FDIA + POB + TEB}{C + GDP + TPOC + TEC}}{4} = \text{TNI} \quad (1.5)$$

where TNI - transnationality index of the country;

FDI – total FDI, C – the capital of the country;

FDIA – FDI accumulated in the country;

¹ Russian Foreign Trade Academy. Transnationality Index. – URL: <http://www.vavt.ru/glossecon/glossecon/LSPECDAC8> (accessed: 20.04.2019).

GDP – a Gross domestic product of the country;
POb - production output in the branches of the corporation;
TPOc- total production output in the country;
TEb – total number of employees in the branch;
TEc- total number of employees in the country;

The closer this indicator is to 1, the higher the impact of TNCs on the country's economy; the closer this indicator is to 0, the lower the level of influence of TNCs on the country's economy.

These indicators of the degree of transnationalization are monitored by various international organizations, in particular, UNCTAD. According to the report on the activities of TNCs and global investments in 2018, the main trend of business transnationalization is the increase in the political component and the growth of barriers to trade between countries. As a result in 2017 FDI in the whole world decreased by ¼. First of all, it affected countries with economies in transition and underdeveloped markets. In order to prevent this trend from developing in the future, there is a need for sustained growth in the activities of TNCs in emerging markets.

In the context of the 4th industrial revolution, TNCs are beginning to actively purchase the scientific achievements of developing countries. It leads to the change of global value chains and as a result, countries having higher value FDI and TNI become the new technological leader. A key issue for developing countries and countries with economies in transition is to overcome the structural constraints of infrastructure development and to enable the strategic and long-term transnationalization of business. By regions of the world the main trends of transnationalization are as follows:

1. The decline in global FDI by \$ 1.43 trillion is the main reason for the restriction of M&A Processes by the European Commission and the US Antimonopoly service;
2. FDI stagnation in developing countries - the value of FDI remains consistently low after the previous fall;
3. The decline in FDI in underdeveloped countries in Africa is caused by natural and climatic problems: drought, agricultural decline;
4. FDI to the most developed countries decreased by more than 1/3 (700bn) due to the decline in corporate restructuring activity, as well as negative expectations of investors about the change in the political situation in Europe (Brexit).

Consider the general dynamics of FDI by country group in figure 1.13.

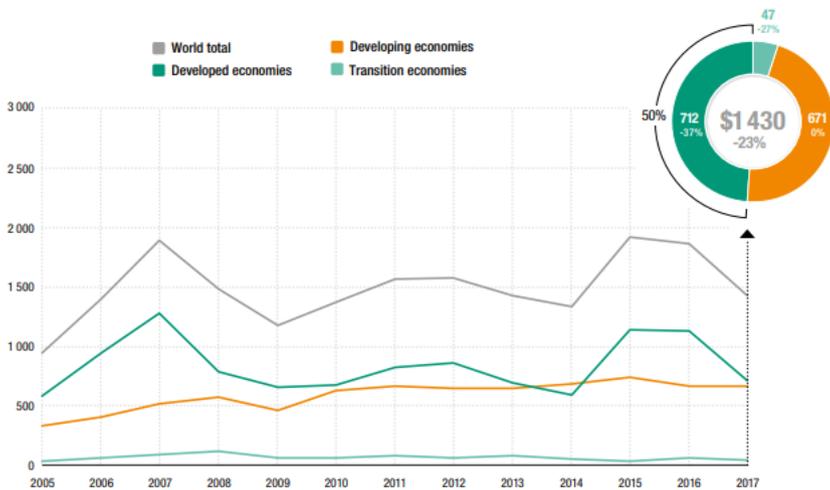


Figure 1.13. — FDI inflows, global and by a group of economies, 2005–2017 (Billions of dollars and percent)¹

From figure 1.13, the following conclusions can be drawn:

1. Currently, there is the uncertainty of international investors in the field of geopolitics, which causes instability of investors' expectations from the world economy;

2. Forecasts of dynamics for 2019-2020 show relative instability due to further uncertainty about the dynamics of prices for natural resources (oil, gas, coal, gold), which may have been caused by a decrease in the credit ratings of the main importers of these resources (Middle East, Russia), as a result, even in a positive scenario, the dynamics of investments will still remain below the global average over the past 10 years;

3. Reducing the role of GVC in global investment dynamics due to tax and customs reforms in the EU and the US;

4. The decrease in return on investment – in recent years it has decreased from 8.1% to 6.7% per annum, and the decline is observed in all regions of the world. This may affect long-term FDI in the world.

5. First of all, such processes affect the primary sector of the economy, services, and manufacturing, which account for more than three-quarters of the world's GDP. Herewith, for underdeveloped countries, FDI is, in fact, the only source of survival, as it provides more than half of the GVC in the regions.

Gradually, one can see the shift of the GVC from material forms to intellectual and information forms, which in the works of domestic and foreign scientists is defined as "digital economy" and "digital technologies in the economy". The existing system of world economy shows that about hundreds of the

¹ UNCTAD, FDI/MNE database. – URL: www.unctad.org/fdistatistics (accessed: 20.04.2019).

world's leading TNCs included in such ratings as S&P 500, FTSE 100, Fortune Global 500, Dow Jones define the culture and processes in the world economy. That is, they provide most of the added value in the field of GVC.

Let us consider in more detail the level of transnationalization of countries and regions, which are presented in figure 1.14.

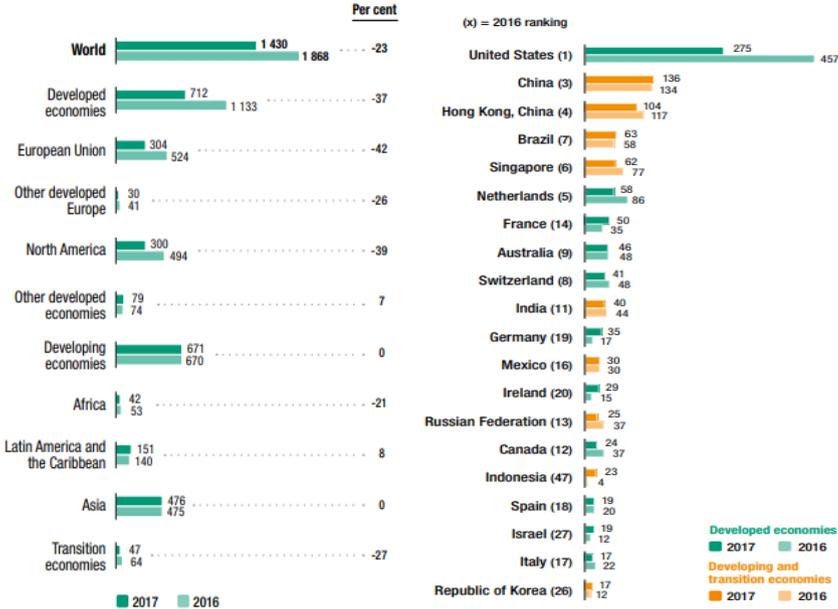


Figure 1.14. — FDI inflows, by region and top 20 host economies, 2016–2017, (Billions of dollars and percent)¹

As can be seen from this figure, the negative FDI dynamics shows a negative trend in almost all countries and regions, it is logical that the largest investor and recipient of FDI in the US and Chinese economies. France, Germany, Indonesia show the positive dynamics and the CIS countries, including Russia, are in the negative trend, as well as almost all countries of Southern and Eastern Europe, which are more affected by the global financial crisis began in 2012. It is characteristic that most of the recipients of FDI are the developing countries and developed countries are among the larger investors.

On average, the return on investment is growing after the decline in the level of development of the country and this is understandable. In business, there is a practice called "risk-free" whereby investments in riskier assets are offset by higher returns (taking into account discounting and the accumulated future value of the annuity). For example deposits in banks that are lower rat-

¹ UNCTAD, FDI/MNE database. – URL: www.unctad.org/fdistatistics (accessed: 20.04.2019).

ed promise higher returns than investing in risk-free government bonds. In this regard, for developing countries, we can recommend the search for new sources of financing, namely portfolio investment, long-term loans, short-term credit, subsidies, debt refinancing and so on.

At present, the structure of financial flows from the three types of countries under consideration can be described as follows: for developing countries and countries with economies in transition take about 40% of the GVC, underdeveloped countries - about 15-20% of the GVC, and developed countries account for 35-40% of the GVC. In this regard, we see a prospective investment in real production and the real economy, which should increase international trade operations and their profitability.

Further we will consider in more detail the economies of Russia and Brazil, as for Brazil, the participation rate in GVC as a percentage of exports is about 41% (Latin American countries), and for Russia more than 50% as for a country with economy in transition, while the average growth rate of participation in the GVC of these countries and regions that they represent is on average higher than in developed countries.

Despite the development of science and technology peak of which occurred at the beginning of the 20th century (conveyor, the basis of nuclear technology, breakthroughs in pharmaceuticals, electric car), they were used to a large extent for military purposes, as a result there was a skew and decrease in the stability of the global production system. Two world wars led to the almost complete annihilation of production areas and production capacities of the warring countries (industry of Japan, Germany were almost completely destroyed as a result of bombing). This led to a decrease in the global population and a decrease in migration due to the closure of the territory (the Berlin wall).

Paradoxically, the almost complete destruction of production was at the same time the push for further development. The most striking example is the "Japanese economic miracle" and the development of the economies of the "Asian tigers" (Singapore, Malaysia, Hong Kong), whose industry and economy were recreated from scratch, with special attention paid to the service sector, which according to most investors is the engine of further economic development (first, production should be created, and on its basis should develop related services - this point is the most sustainable in the world economy).

In this context, I would like to note the current trends in Russia - the increasing role of the digital economy and digital marketing in the activities of TNCs. However, contrary to the popular opinion of many modern authors, the digital economy cannot and should not be a central element of sustainable development of the Corporation, it is rather appropriate to talk about digital technologies in TNC technology, because otherwise, if it is now digital in view of the development of IT technologies, it should have been "electric economy, "steam economy" and so on in the past. But we know perfectly well that there were no such economies, therefore the activities of the Corporation should be considered from the standpoint of their real assets, since in the opposite point of view "removing the plug from the outlet" should actually stop the whole

process of development, however, corporations that "bake bread will continue to bake bread", and those that "sew panties will continue to sew panties".

The more complicated is the situation with digital marketing. Often considered the BRICS countries, the investment attractiveness of the territory for TNCs is considered exclusively from advertising positions, that is, replacing the real production economic conditions with propaganda. Even analyzing the sites of investment agencies of the territory –leaders in terms of investment attractiveness (in Russia – it is Moscow and the Republic of Tatarstan), among the indicators characterizing the territory there is no production! The length of roads and the share of water resources are clearly not related to them, so we decided to clarify this situation; marketing, advertising (digital marketing) are actually "cherry on the cake", while competent investors choose the territory where they will have their production facilities (figure 1.15).

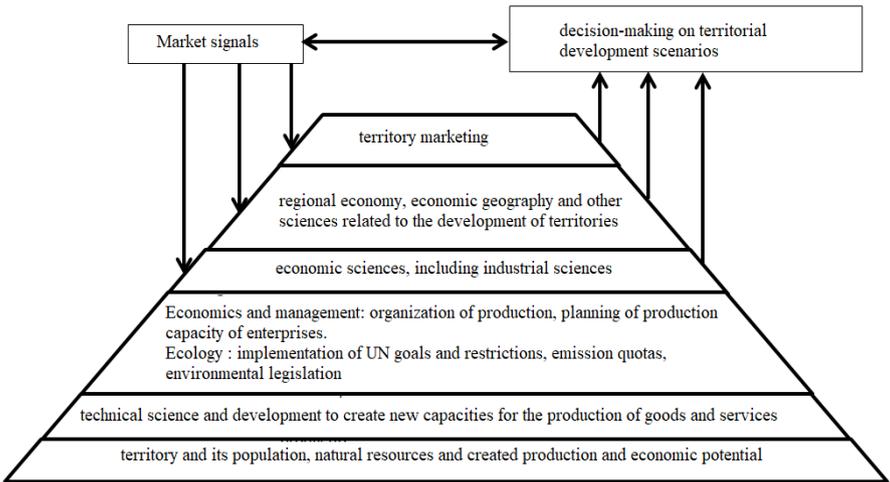


Figure 1.15. — Place of marketing territories in the General system of Sciences (compiled by the author).

As follows from the figure, when the evaluation of the performance of TNCs in the countries it is necessary to show first of all how they have affected the real level of living of the population in the country (real social efficiency); how they have developed small business and innovative entrepreneurship in the country (economic efficiency); how they were able to increase the flow of funds in the state budget (budget efficiency). That is, regardless of the topic of the monograph, the impact of TNCs on the economy and society should be real, not digital (virtual), and this is the main indicator of the quality of the work performed.

Chapter 2. ASSESSMENT OF THE IMPACT OF TNCS ON THE ECONOMY OF BRAZIL AND RUSSIA

2.1. General characteristics of the economy of Brazil and Russia, the main trends of their development

Let us first describe the overall picture in the world economy, as Russia and Brazil are active participants in global economic relations. For the past 10 years, the world has been living in a structural crisis it is not described only by output fluctuations, macroeconomic imbalances or political instability. Its essence is in a deep transformation covering various aspects of life in the leading countries of the world, both developed and developing. We can say that this is a crisis of socio-economic and political identity, leading to the formation of new realities (trends), which are likely to dominate the world for the next few decades.

During the crisis decade, there are episodes of both recovery and decline, both acceleration and braking. However, the key feature of this period is the general instability of all trends (primarily economic growth) and the sharply increased uncertainty of the consequences of both technological innovation and economic policy. Consider the dynamics of economic growth in Russia against the background of the largest countries, which are presented in table 2.1.

Table 2.1. — Economic growth in 2008–2017¹ (compiled by the author)

1	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDP dynamics,% to the previous year										
World	3.0	-0.1	5.4	4.3	3.5	3.5	3.6	3.4	3.2	3.7
Russian Federation	5.2	-7.8	4.5	5.1	3.7	1.8	0.7	-2.8	-0.2	1.8
European Union (Eurozone)	0.4	-4.5	2.1	1.6	-0.9	-0.2	1.3	2.0	1.8	2.1
Great Britain	-0.6	-4.3	1.9	1.5	1.3	1.9	3.1	2.2	1.8	1.7
USA	-0.3	-2.8	2.5	1.6	2.2	1.7	2.6	2.9	1.5	2.3
Germany	0.8	-5.6	3.9	3.7	0.7	0.6	1.9	1.5	1.9	2.5

¹ International Monetary Fund. World Economic Outlook Database. – URL: <http://www.imf.org/ru/Publications/WEO/Issues/2018/01/11/world-economic-outlook-update-january-2018> (accessed: 20.04.2019).

Continuation of Table 2.1

France	0.2	-2.9	2.0	2.1	0.2	0.6	0.9	1.1	1.2	1.8
Italy	-1.1	-5.5	1.7	0.6	-2.8	-1.7	0.1	0.8	0.9	1.5
Spain	1.1	-3.6	0.0	-1.0	-2.9	-1.7	1.4	3.2	3.2	3.1
Greece	-0.3	-4.3	-5.5	-9.1	-7.3	-3.2	0.4	-0.2	0.0	1.8
China	9.6	9.2	10.6	9.5	7.9	7.8	7.3	6.9	6.7	6.8
India	3.9	8.5	10.3	6.6	5.5	6.4	7.5	8.0	7.1	6.7
Brazil	5.1	-0.1	7.5	4.0	1.9	3.0	0.5	-3.8	-3.6	1.1
South Africa	3.2	-1.5	3.0	3.3	2.2	2.5	1.7	1.3	0.3	0.7

As can be seen from the table, the economic growth of the Russian Federation shows that:

1. The dynamics of economic indicators of Russia is weaker than the world values

2. Russia's economy lags behind the economies of the world's largest countries: the United States, Britain, France, that creates threats for the position of the Russian TNCs in international markets. This trend can be noticed now, analyzing the rating of Global Fortune 500, accumulating data of the largest TNCs in the world¹. It is significant that in this list there are only 2-3 Russian TNCs and all of them represent the oil and gas sector, which is actually being the engine of the Russian economy.

3. Against the background of the BRICS countries, the Russian economy is at 3-4 places on average annual economic growth. It is difficult for our economy to compete to actively growing economies of India and China which on a maximum use the human capital. At the same time having sufficient resources, the Russian Federation is above Brazil and the Republic of South Africa. By its potential, the Russian economy could be much higher, but the large scale of unused territory and the low degree of processing of resources do not allow Russia to really compete with the largest economies of the world. As an illustrative example, we can say that from January 1, 2019, a new technological revolution began in Russia. However, it is stated only in words - "the revolution of the best available technologies", with the depreciation of fixed assets in the country in some industries reaches 70-80%, so it is not necessary to speak about any best technologies.

In general, considering the key economic indicators of the Russian economy, which, in addition to GDP, include: inflation, unemployment, key interest rates, public debt, savings and investments - it can be concluded that Russia, on the one hand, is ahead of the underdeveloped countries, but, on the other hand, it is still significantly inferior to the most developed countries of the world. That is why the Russian Federation belongs to the developing countries, overcoming the period of the transition economy. The ratio of key indicators of the Russian Federation to the leading countries is presented in Figure 2.1².

¹ Global Fortune 500. – URL: <http://fortune.com/global500/> (accessed: 20.04.2019).

² UNCTAD. Country profile. – URL: <https://unctadstat.unctad.org/CountryProfile/GeneralProfile/en-GB/643/index.html> (accessed: 20.04.2019).

By the end of 2017, an optimistic view of the state and short-term prospects of socio-economic dynamics was formed. Global growth is estimated as quite high and without inflation. The International Monetary Fund (IMF) for 2017–2018 predicts a global economic growth rate of 3.7% (versus 3.3% in the previous two years), which corresponds to the expert consensus. The main problems of the world economy include the following:

1. the expectations of 2008–2010 did not materialize, that this time the leading developing economies (first of all China) will become the driving force of the way out of the crisis - the role played by the American economy again.

2. the outlined growth approximately corresponds to the average rates of the last 50 years (after 1965), which means that it will go on to a sustainable path.

3. the lack of significant fluctuations in the world economy is due to the rejection of the policy of "creative destruction" - the policy agreement for a sharp decline for the sake of the same further rise (V-shaped post-crisis curve).

4. world trade is now growing more slowly than a decade ago, and countries are increasingly resorting to protectionist measures on a larger scale.

The revealed trends in the global economy are due to a number of objective reasons firstly, the supplying countries of cheap goods are increasingly reorienting to the domestic market — considerable on scales and due to the high population size of Asia, and because of the growing prosperity of the local population as a result of the accelerated growth of the previous decades. Secondly, the location of production is increasingly approaching the regions of consumption and R & D (sometimes it is called the re-industrialization of developed countries).

5. The productivity growth remains low, inequality is growing and social problems that are connected with deep transformation of the labor market under the influence of technological shifts.

The resumed growth of the world economy has not yet been accompanied by an increase in productivity. It relies mainly on factors that are on the demand side — that is, price factors.

Russia entered into a global crisis at the same time as other leading developed and developing countries, but now we can talk about some delay in its development in our country. The considerable accumulated reserve, which is saved up by 2008, and macroeconomic stability (low debt and a budget surplus) made it possible to mitigate the social and political consequences of the crisis, and its new aggravation occurred already in 2014–2015. Successful anti-crisis policy 2015–2016 provided the minimum recession, control over the main macroeconomic parameters, the preservation of reserves and unprecedented for a quarter of a century suppression of inflation.

In 2017, the economic dynamics of Russia became again positive, however, in a number of parameters, it remained unstable and contradictory (Appendix №2). GDP growth resumed, which in 2017 amounted to about

1.5%, which that approximately corresponds to potential growth, which for the modern Russian economy is estimated at 1.5–1.8%¹. In the context of the accelerating growth of the global economy and the leading developed and developing countries, this rate looks low. It does not correspond to the “a political target” - the growth rate is higher than the worldwide average².

Consider the dynamics of indicators of Foreign economic activity of the Russian Federation (figure 2.1). Russian exports in 2017 increased compared to the same indicator in 2016 by 25.3% - to 353.1 billion dollars, Russian imports - by 24.1% - to 237.8 billion dollars. The current dynamics of exports and imports ensured an increase in the trade surplus by 27.8% to \$ 115.3 billion.

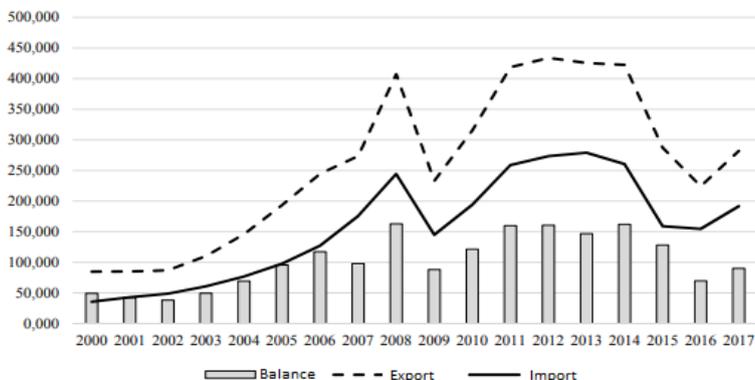


Figure 2.1. — Main indicators of Russian foreign trade (2000-2017), billion dollars³

In the Russian economy, GDP is formed by organizations, primarily of the corporate form of ownership: oil and gas TNCs provide up to 80% of the national budget revenues both through exports and tax deductions. In this regard, of particular interest was the investment policy or investment attractiveness of the Russian economy for both domestic and foreign TNCs.

Investment activity of the business is the most important factor for sustainable economic growth. Investments in fixed assets increased by 4.4%, for the first time since 2013, demonstrating a positive trend. In the government and in the expert community, began discussions about mechanisms for the additional attraction of investment resources from private business. We are talking about expanding the institutions of public-private partnership, as well as the possibilities of introducing a new tool - infrastructure mortgage.

¹ Sinelnikov-Murylev S., Drobyshevsky S., Kazakova M. Decomposition of GDP growth rates in Russia in 1999-2014 // Economic policy. – 2014. – No. 5. – P. 7-37.

² Consultant Plus. Message from the President of the Russian Federation. 1st December 2016. – URL: http://www.consultant.ru/document/cons_doc_LAW_207978/ (accessed: 20.04.2019).

³ CBR. Foreign trade of the Russian Federation. – URL: https://www.cbr.ru/statistics/credit_statistics/print.aspx?file=trade.htm (accessed: 20.04.2019).

Despite foreign economic sanctions, the Russian economy remains attractive for localization foreign TNCs on its territory and at the same time, Russian TNCs are striving to enter the international market. In this regard, we consider the main trends in international trade, exports, and imports. Annual and quarter dynamics of macro indicators for the period 2016–2017 shows a gradual decrease in the depth of the decline in depth of the recession in practically all major macroeconomic parameters under the influence of such factors as a slowdown in inflation rates, a change in the structure of production costs due to the devaluation of the ruble, and a recovery in the growth of foreign trade turnover. The share of net exports in GDP at current prices in the first half of 2017 increased to 6.6%, and by the end of the year amounted to 5.5% and by 0.2 percentage points exceeded the level of the previous year.

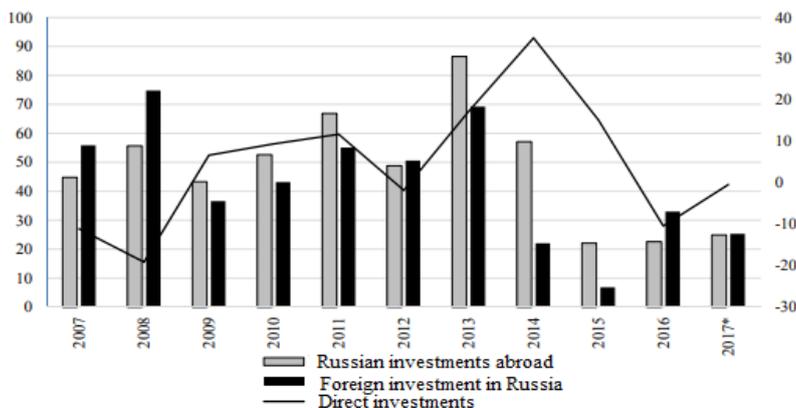
Consider the investment activities of TNCs in the Russian fixed assets market holding up to 60-70% in the structure of assets of the largest industrial enterprises. Investment crisis of 2013–2016 It took a protracted nature, which was exacerbated by changes in the level of availability of resources in the global capital market, the structure of the formation of gross national savings, the nature of the movement of capital goods and investments in terms of sanctions, and the decline in the activity of Russian and foreign investors in the domestic market. It should be noted that in the acute phase of the investment crisis (IV quarter of 2014 - IV quarter of 2015), the decline in business activity was determined by a sharp increase in both the key rate and prices for investment products. The dynamics of investment activity in 2016 was heterogeneous, which is associated with the influence of factors of economic adaptation to changes in macroeconomic conditions of access to the global capital market¹.

With the change in the macroeconomic situation in 2016–2017 there was an inflow of direct investment in the Russian economy, which for the first time since 2012 exceeded Russian investment abroad (figure 2.2).

The share of investments from other sources of financing, the dominant part of which is accounted for by institutional investors with state participation, in 2017 amounted to 12.0% of the total investment after a 4-year reduction in their share and scale of investment activity.

The state investment strategy for 2009–2017 proceeded from the recognition of large businesses as the most important subject of national modernization and global competitiveness. First, the role of the state as a subject of activation of the investment process was to actively participate in the formation of the Russian corporate sector with an emphasis on the creation, optimization and structural evolution of the large companies, as well as increase their competitiveness. In recent years, the state has actively participated in the process of formation state holdings in the aerospace, shipbuilding industry, railway transport, and in the oil sector.

¹ Institute named after E. T. Gaidar Russian Economy in 2018. Trends and Prospects of the Economic Policy. – URL: <https://www.iep.ru/files/text/trends/2018/2018.pdf> (accessed: 20.04.2019).



2017* January - September 2017

Figure 2.2. — Direct investment in the Russian Federation in 2007–2017, balance of payments, billion dollars¹

The investment crisis in state-owned enterprises has become a protracted nature and is a reflection of the low efficiency of their operation. The fall in investments of state corporations in 2015 by 16% compared to the previous year and determined their low investment activity in 2016-2017. The complexity of the investment process management mechanisms has actualized the problems of improving the investment climate and intensifying efforts to optimize the institutional structure, to reduce the state's participation in the economy and the implementation of privatization programs.

Russia, which is a member of BRICS, is interested in the expansion of the foreign trade relations with the world's largest partners, such connections are best implemented within the framework of international organizations, one of the largest foreign trade partners of the Russian Federation is Brazil. This country is a member of a number of international economic organizations. The country is in the WTO, MERCOSUR, UNASUR, G8+5, G20 and the Cairns Group, and also plays an important role in the activities of non-formalized international groups of the BRICS. Brazil is implementing joint projects in the field of interaction between TNCs on shelf (ocean) production, export-food products, and joint projects in shipbuilding. Let us consider in more detail the economy of Brazil and its investment sphere.

The Brazilian leadership failed to achieve significant positive dynamics of growth in the national economy by the end of 2017: GDP growth was 1.0% (in terms of 2017 GDP, about 2.02 trillion US dollars), industrial production remained at the level of 2016 – 3.8%, agricultural production - 13.0%, services - 0.3%, imports - 9.3%, investment (gross fixed capital formation) -

¹ Rosstat. Investment in Russia. – URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1136971099875 (accessed: 20.04.2019).

1.8%, exports - 10.38%. The unemployment rate was fixed at 13.0% (about 12.9 million people). The budget deficit amounted to about 124.1 billion BRL (about \$ 38.3 billion). Through the efforts of the economic block of the government and the Central Bank to keep inflation (in line with the forecast of 3.0%), in the conditions of the volatility of the national currency as a whole, it was possible to reach the level of 2.95%¹.

Despite the significant slowdown in negative processes in the national economy. The destructive domestic political struggle between parliamentary parties and the ruling coalition associated with corruption scandals involving politicians from both sides and the leadership of 30 largest Brazilian companies, including the state-owned Petrobras, has had and continues to have a negative impact on it and the investment climate in the country. The ongoing anti-corruption investigation "Operation Lava Jato", despite the activities of the new Brazilian leadership to reduce the activity of the investigating authorities, led to a drop in the level of economic activity of these companies and their suppliers, which in turn affected the already weak indicators of industrial production in the country.

Financial and economic crisis against the background of internal political instability forced Brazil to reconsider also the positions relatively out of regional "players". Decrease in volumes of the foreign investments to the country and headed by the government M. Temer for liberalization of national economy, in the conditions of an acute of budgetary funds, was forced to look for possibilities of overcoming economic problems through providing advantageous offers, first of all, to corporations of the USA and the EU along with the Chinese investment projects which already deeply got into national economy.

The policy of liberalization has allowed attracting the world's largest players in the framework of international cooperation with TNCs in the space sphere, nuclear and others. The involvement of TNCs in the national economy allows increasing the key economic indicators of the country, which include GDP. According to data published by the Brazilian Institute of Geography and Statistics - IBGE Brazil's GDP grew by 1.0%. The aggregate GDP of the Brazilian economy was 6.6 trillion BRL (2.02 trillion. US dollars), in 2016 (6.266 trillion BRL - 1,799 trillion. US dollars). GDP per capita in 2017 amounted to 31,586 BRL (an increase of 3.1% compared with the previous year²).

Nowadays, in accordance with the United Nations classification, Brazil is classified as "newly industrialized countries". It also refers to countries with "emerging markets". Brazil accounts for up to 2/3 of the industrial and over half of the scientific and technological potential of the Latin American region. By ensuring, through attracting transnational companies, the production of a number of positions of first-class high-tech products, Brazil is primarily interested in acquiring advanced innovative technologies and investments abroad.

¹ Analytical center under the Government of the Russian Federation. Brazil: on the way out of the socio-economic crisis'. – URL: <http://ac.gov.ru/files/publication/a/16109.pdf> (accessed: 20.04.2019).

² IBGE. National accounts. – URL: <https://www.ibge.gov.br/en/statistics/economic/national-accounts.html> (accessed: 20.04.2019).

The investment policy of the Brazilian government is aimed at increasing public investment expenditure and restoring the growth rate of private investment (national and foreign¹).

As part of its interaction with other BRICS countries and regional trade associations, Brazil seeks to maintain an active trade balance, to encourage exporters and importers of goods into the country, as a result - an increase in the trade surplus. The Russian Federation occupies the 14th position in the list of Brazil's trade partners, with a share in Brazil's trade turnover of 1.4%.

According to the Ministry of Development, Industry and Foreign Trade of Brazil, the total foreign trade turnover of Brazil in the period from January to December 2017 amounted to 368.4 billion US dollars, which is 12% more than in the same period of 2016, when foreign trade turnover amounted to 322, \$ 7 billion. Exports of Brazilian goods in 2017 amounted to \$ 217.7 billion, thus increasing by 15% compared to 2016 (\$ 185.2 billion), while imports increased by 9% and amounted to \$ 150.7 billion compared to the same period in 2016 (\$ 137.5 billion²) (table 2.2).

Table 2.2. — Brazil's trade balance in dynamics, millions of US dollars (2016-2017)³ (compiled by the author)

	2017	2016	Dynamics in %
Export	217,7	185,7	+ 15
Import	150,7	137,5	+ 9
Balance	+ 66,9	+ 47,6	+ 29
Turnover	368,4	322,7	+ 12

As can be seen from Table 2.2, Brazil maintains a positive trade balance and the dynamics of export-import operations. As a result, a surplus of two years.

After analyzing the general state of the economy and foreign trade of Russia and Brazil, we can draw a number of conclusions about the main aspects and interaction caused by active trade and political relations⁴:

- According to the Ministry of Industry, Foreign Trade and Services, in 2017, Brazil exported goods and services to the Russian Federation totaling \$ 2.7 billion and imported - to \$ 2.6 billion.

¹ Analytical center under the Government of the Russian Federation. BRICS countries: classification of regions. – URL: <http://ac.gov.ru/files/publication/a/17357.pdf> (accessed: 20.04.2019).

² Ministry of economic development of Russia. Annual review of the state of the economy and the main foreign economic activities of the Federal Republic of Brazil in 2017. – URL: <http://91.206.121.217/ТрАpi/Upload/f88d00cb-0f8c-43a9-b4ec-ce7d93f31d57/%D0%93%D0%BE%D0%B4%D0%BE%D0%B2%D0%BE%D0%B9%20%D0%BE%D0%B1%D0%B7%D0%BE%D1%80%20%D1%8D%D0%BA%D0%BE%D0%BD%D0%BE%D0%BC%D0%B8%D0%BA%D0%B8%20%D0%91%D1%80%D0%B0%D0%B7%D0%B8%D0%BB%D0%B8%D0%B8%202017.docx> (accessed: 20.04.2019).

³ IBGE. System of National Accounts. – URL: <https://www.ibge.gov.br/en/statistics/economic/national-accounts/17173-system-of-national-accounts-brazil.html?=&t=o-que-e> (accessed: 20.04.2019).

⁴ World Data Atlas. Brazil. – URL: <https://knoema.ru/atlas/Бразилия> (accessed: 20.04.2019).

– The volume of the traditionally negative for Russia bilateral trade turnover decreased significantly in the reporting period. In 2017, the negative balance was reduced to \$ 100 million (2016 - \$ 270 million).

– The share of Russia in the total volume of Brazil's trade with the countries of the world - \$ 368.48 billion - in the reporting year as a whole remains at the same level and is about 1.4%.

– The share of Russia in Brazil's exports and imports remained stable in 2017: total volume of Brazilian imports is \$ 150.74 billion, Russia's share was 1.72%; the total volume of Brazilian exports \$ 217.74 billion, Russia's share is 1.24%.

The main players in the foreign trade market between the two countries are private TNCs, therefore, it is logical to consider the similarities and differences in the financial and economic regulation of their activities in both markets, which will be done in the 2nd paragraph of this chapter.

2.2. Legal regulation of TNC activities in Brazil and Russia

Reference of the countries to the BRICS group is not accidental, this international organization brings together the largest players in emerging markets in all continents of the world. Close international cooperation is developing between these countries, both in terms of public-private partnership (PPP) and in the field of transnationalization of business.

On this basis, it is very important to analyze the regulatory and legal conditions for the activities of TNCs in the markets of the countries under consideration. Too large differences in terms of access of national and foreign TNCs to local markets, the possibility of their penetration into the market and the work of local TNCs will adversely affect the prospects for the work of BRICS.

Let us consider the main provisions of the investment economic policy of the Russian Federation. Any penetration of TNCs in foreign markets begins with customs control procedures and customs barriers (tariff and non-tariff) that countries represent companies and their imported goods (services), customs duties, handshaking, taxes, direct bans on import/export (Sanctions, For example, the ban on the export of ivory from Cote d'Ivoire). We will examine the export customs duties¹.

The oil industry occupies an important place in the economy, both in Russia and in Brazil, so 2017 was the "big tax maneuver", in which there was a decrease in export duties on oil and light petroleum products at the same time

¹ Ministry of economic development of Russia. Annual review of the state of the economy and the main foreign economic activities of the Federal Republic of Brazil in 2017. – URL: <http://91.206.121.217/TpApi/Upload/f88d00cb-0f8c-43a9-b4ec-ce7d93f31d57/%D0%93%D0%BE%D0%B4%D0%BE%D0%B2%D0%BE%D0%B9%20%D0%BE%D0%B1%D0%B7%D0%BE%D1%80%20%D1%8D%D0%BA%D0%BE%D0%BD%D0%BE%D0%BC%D0%B8%D0%BA%D0%B8%20%D0%91%D1%80%D0%B0%D0%B7%D0%B8%D0%BB%D0%B8%D0%B8%202017.docx> (accessed: 20.04.2019).

as the increase in the Severance tax (oil and gas production tax) and export duties on dark petroleum products. It was planned to introduce an export duty on fuel oil in the amount of 100% of the duty on oil as part of the tax maneuver from 2015, but oil companies did not have time to introduce new capacities that would increase the depth of oil refining. The Ministry of Energy and the Ministry of Finance agreed on a compromise option, according to which the increase in duty on fuel oil was carried out in stages and reached 100% in 2017.

In accordance with the Decree of the Government of the Russian Federation of August 15, 2016 No. 797 "On Amendments to the rates of export customs duties on goods exported from the Russian Federation outside the borders of the States parties to the agreements on the Customs Union", from September 1, 2016, export duties on 200 commodity items have been abolished, 7 - reduced.¹

Decree of the Government of the Russian Federation of August 19, 2017 No. 984 "On Amendments to the rates of export customs duties on goods exported from the Russian Federation outside the States parties to the agreements on the Customs Union" in connection with implementation of Russia's obligations under the World Trade Organization (WTO), from September 1, 2017, the rates of export customs duties on the goods of the manufacturing industry were reduced².

Consider import duties. In accordance with the Decision of the Board of the Eurasian Economic Commission (EEC) of May 11, 2017 No. 44, from September 1, 2017, in the framework of fulfilling the obligations agreed upon by the Russian Federation upon accession to the WTO in 2012, the rates were reduced³.

In the Common Customs Tariff (ETT) almost 1000 tariff lines. Also with accomplishment of the obligations undertaken when the Russian Federation joined the WTO, on June 23, 2017, the Council of the EEC decided to change the rates of import customs duties in relation to 472 positions of the Foreign Economic Activity Commodity Nomenclature of the Eurasian Economic Union from the list of so-called sensitive products, which include various types of equipment, etc.

New rates began to operate in early September 2017. As a result, the average weighted rate of import tariff dropped to 5.3% (from January 1, 2017, it was 5.4%). We will remind, before joining the WTO in 2012, the average duty for importing goods into the territory of the Russian Federation was 9.6%. In the first year after accession, the decrease affected only 10% of tariff

¹ Consultant Plus. Order of the Government of the Russian Federation of 15.08.2016 № 797 "About modification of rates of the export customs duties on the goods exported from the Russian Federation outside the States - participants of agreements on the Customs Union". – URL: http://www.consultant.ru/document/cons_doc_LAW_203594/ (accessed: 20.04.2019).

² Garant. Order of the Government of the Russian Federation of 19.08.2017 № 984 "On amendments to the rates of export customs duties on goods exported from the Russian Federation outside the States parties to the agreements on the Customs Union". – URL: <https://www.garant.ru/products/ipo/prime/doc/71653194/> (accessed: 20.04.2019).

³ Alta. Decision of the Board of the Eurasian Economic Commission (EEC) of 11.05.2017 № 44. – URL: <https://www.alta.ru/tamdoc/17kr0044/> (accessed: 20.04.2019).

positions (out of 11 thousand), but by September 2015 its level was reduced to 5.5% (in 2014–2015, rates were reduced by more than 4,000 tariffs positions). By the end of the transition period in 2019, the weighted average rate of the import tariff of the Eurasian Economic Union should be 4.5%.

Besides tariff regulation, the world trade organization, a member of which is the Russian Federation, also regulates non-tariff methods in international trade. In November 2017, the regular Report of the WTO on the G20 trade measures was issued. For the period from mid-May to mid-October 2017, the G20 countries have established 16 new measures restricting international trade. These include the introduction of new or increase in existing tariffs, export restrictions, and requirements for the localization of value added. This averages just over three restrictive measures per month in comparison with six measures recorded during the previous period (from October 2016 to May 2017). In 2015, an average of 8 measures restricting world trade was introduced monthly.

Now the G20 countries apply 12,244 trade restrictive measures. According to the WTO, as of June 30, 2017, the largest share in the total number of non-tariff measures taken was accounted for by sanitary and phytosanitary measures (28.5% of all non-tariff measures taken). This is followed by technical barriers to trade (21.5%) and anti-dumping measures (13.8%).

According to the data presented in the Register of restrictive measures, as of December 1, 2017, 143 measures have been identified that restrict access to the markets for Russian goods. These statistics show that over the course of four years, the number of restrictive measures in the Russian Federation has increased considerably, which characterizes the deterioration of political and economic ties with the EU countries and the USA (table 2.3). Within the framework of the sanctions policy of the European Union, the USA, Japan, Ukraine, Switzerland, Norway, Australia, Iceland, Liechtenstein, Montenegro, and Albania, these countries have imposed a ban on the import of goods originating from the Crimea and the city of Sevastopol.

Table 2.3. — Dynamics of the number of restrictive measures by year (2014-2017)¹

	2014	2015	2016	2017
Restrictive measures				
Antidumping duty	40	39	40	43
Special protective duty	9	15	17	13
Countervailing duty		1	1	1
TBT-measures	9	9	10	15
Sanitary and Phytosanitary measures	3	7	11	17
Quotas (including tariff quotas)	2	3	3	3
Excise duties on a discriminatory basis	5	4	5	7
Import bans	4	3	4	6
The threat of the introduction of measures	5	5	5	8
Other non-tariff measures	25	24	29	30
Totally	102	110	125	143

¹ Institute named after E. T. Gaidar Russian Economy in 2018. Trends and Prospects of the Economic Policy. – URL: <https://www.iep.ru/files/text/trends/2018/2018.pdf> (accessed: 20.04.2019).

Let us briefly review the main documents regulating the foreign trade relations of Russian companies with their foreign partners:

1. The Federal Law of 14 November 2017 No. 317-FL ratified the Treaty on the Customs Code of the Eurasian Economic Union. The Customs Code is aimed at optimizing customs operations, further liberalizing customs rules and codification of the agreements which are separately existing within the union - the provisions of international treaties that are in the EEU law are codified¹.

2. On February 22, 2017, the WTO Agreement on Trade Facilitation (hereinafter the Agreement), adopted at the 9th Ministerial Conference of the World Trade Organization, held in Bali, Indonesia in December 2013, entered into force. The agreement is aimed at ensuring transparency and simplification of a burden of customs formalities and procedures, which will promote to reduce costs in the implementation of trade operations and overcome the problem of delays in the supply of goods. The solution of all these problems is of particular interest for small and medium-sized businesses, since new opportunities for participation in international trade will open up before it.

3. On February 26, 2016, the Federation Council of the Russian Federation ratified the protocol to the Marrakesh Agreement on WTO, which provides for the inclusion of the Agreement on Trade Facilitation in Annex 1A to the Marrakesh Agreement Establishing the WTO. Russia is already implementing some of the provisions of this WTO Agreement, although problems still remain. The implementation of the "single window" technology is being delayed, frequent complaints from entrepreneurs are causing methods for collecting customs payments on the basis of so-called "risk profiles"

4. In the World Bank's Doing Business 2018 ranking, Russia climbed an indicator "international trade" from 140th to 100th place from 190 countries thanks to the opening of a new deepwater port on the coast of the Gulf of Finland. This allowed to increase competition and reduce costs associated with border control in the port of St. Petersburg².

5. The Russian Federation joined the WTO on August 22, 2012, including the WTO trade dispute resolution mechanism. Such a mechanism operates in this organization in accordance with the Agreement on Rules and Procedures Governing the Settlement of Disputes (DPRS). Thus, since August 2012, Russia has the right to protect its trade interests through this tool.

In the structure of foreign trade relations of the Russian Federation, relations with the BRICS countries occupy an important place (figure 2.3). As can be seen from the figure, the trade turnover between the countries of the BRICS countries is comparable, and in some positions, it even exceeds the

¹ Consultant Plus. Federal law "On ratification of the Treaty on the Customs code of the Eurasian economic Union" of 14.11.2017 № 317-FZ (latest version). – URL: http://www.consultant.ru/document/cons_doc_LAW_282617/ (accessed: 20.04.2019).

² The World Bank. Doing Business 2018. – URL: <http://russian.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2018-Full-Report.pdf> (accessed: 20.04.2019).

trade turnover with such organizations as Eurasian Economic Community, Commonwealth of Independent States CIS countries with all countries of the African continent and smaller regional agreements.



Figure 2.3. — Russian foreign trade with selected groups of countries (2017-2018), bln dollars¹

Brazil, as one of the main partners of the Russian Federation on BRICS, seeks, seeks to level whenever possible a condition of foreign trade activity in this organization and in other international organizations participants of which it is. The investment policy of the Brazilian government is aimed at increasing public investment expenditure and restoring the growth rate of private investment (national and foreign). For a more detailed analysis, consider the measures of customs, tariff and non-tariff regulation in Brazil as of 2017.

In Brazil, which is a member of MERCOSUR, since 1995, the MERCOSUR Common External Tariff has been in effect, in which each product has an eight-digit code. The six first digits of the nomenclature correspond to the Harmonized System of description and Coding System, the last two digits reflect the specific features of the commodity groups of the MERCOSUR common market.

Within the framework of MERCOSUR, the parties actively agree on the regulation of import and export duties. The import duties have changed not for 100, but for 200 commodity items corresponding to the codes of the MERCOSUR Unified Nomenclature. According to the National Investment Information Network (RENAI) and the Brazilian Export Promotion Agency, the priority areas for foreign investment are the construction of transport infra-

¹ Ministry of economic development of Russia. Overview and statistics of Russia's foreign trade. – URL: http://www.ved.gov.ru/monitoring/foreign_trade_statistics/ (accessed: 20.04.2019).

structure, telecommunications, electricity distribution, public transport, and tourism. The investment directory RENAI has 137 projects totaling \$ 32 billion.

Brazil also applies para-tariff methods of customs regulation: imported goods are subject to numerous federal and local taxes and fees, which in total can increase the price of goods several times. Such taxes and fees include, for example, a tax on industrial products (IPI) - average rates between 10% and 20%, and for some items reach 300%, a tax on the movement of goods and services (ICMS) - the rates depend on the state and type of goods / services and range from 4% to 19%, social taxes (PIS- Program of Social Integration and COFINS- Contribution for the Financing of Social Security) - at the combined rate of 3.65% to 9.25% and 11.75% from import operations, as well as a tax on financial transactions (IOF) - currently varies from 0.38% to 6.38% depending on the type of operation.

Brazil actively uses non-tariff regulation methods. Brazil has a rule that all importers must be registered with the Foreign Trade Secretariat (SECEX) of the Ministry of Industry, Foreign Trade and Services (MDIC), and also are entered into the SISCOMEX unified electronic foreign trade system.

July 5, 2017, Resolution No. 48 of the Brazilian Chamber of Commerce reduced the duty on Russian producers/exporters of butyl alcohol to 80.7%, which were previously established as a result of an antidumping investigation of imports of butyl alcohol from South Africa and the Russian Federation.

The system of support and promotion of national exports by the Brazilian Government provides for a set of the following measures, tax benefits:

- acceleration of the return of tax credits to exporting enterprises, the share of export products must be at least 30% of the total volume within 2 years;
- distribution of Drawback integrado regime in the domestic market in relation to the national manufacturer. The system provides for the exporter to be exempted from taxes for the reporting period when purchasing national goods with increased value added. There are special measures of temporary tax exemption work for small enterprises;
- cancellation for exporters of industrial goods tax (IPI), if these goods have been imported for the production of export products. Their list includes, in particular, raw materials, packaging, parts, and components;
- exemption of producers of beef, pork, and poultry from paying federal taxes when purchasing domestic raw materials for the production of products intended for export.

Among the forms of state regulation of investment activity in Brazil should be highlighted:

- improvement of the tax system, the mechanism of depreciation and the use of depreciation charges;
- the provision of state guarantees for investment projects at the expense of the Federal budget;

- placement on a competitive basis of the Federal budget and state budgets to finance investment projects;
- protection of investors ' interests;
- granting concessions to national and foreign investors based on the results of trading;
- realization of regional investment programs;
- issue of bonded loans;
- definition of areas of activity in which participation of foreign capital is prohibited;
- examination of investment projects.

The State National Bank for Economic and Social Development (BNDES) provides loans to exporters under a number of existing programs: financing at the production stage of means of production for export and other industries.

In conclusion, let us characterize the state and prospects of development of foreign trade relations of Brazil and Russia. The Convention for the Avoidance of Double Taxation and Prevention of Tax Evasion with respect to Taxes on Incomes (dated November 22, 2004) is in effect between Russia and Brazil in the field of capital movements.

The main branch of cooperation between Russia and Brazil is agriculture. Brazil, despite the protracted recession in the country, has developed industry and efficient agriculture, the latest technologies and experience in deep-sea mining in the oil and gas sector, modern production in the chemical industry, a diverse service sector (banking and financial sectors, trade, storage information Services). Brazil has solid research institutions in the field of hydrocarbons, the agricultural sector, aviation, the automotive industry, biotechnology, the information sector, and others.

At the moment, a number of Russian companies have already begun to implement investment projects in Brazil. Rosneft Brasil E&P Ltda, a subsidiary of Rosneft, in 2016, prepared for the start of drilling in the Solimões river area. Oil service companies, transport, and logistics enterprises were contracted, the necessary infrastructure was created at the drilling sites. In 2017, the company drilled the first exploratory well in the pool Solimões.

2.3. Characteristics and main problems of domestic and foreign TNCs in the economy of Brazil and Russia

We will characterize the activities of the largest Russian TNCs in the domestic market and their assets abroad. In the Fortune 500 ranking, Russian TNCs are introduced a little - only Gazprom, Lukoil, Sberbank, VTB Bank, UC Rusal. At the same time, they occupy places in the first and second hundreds of rating, which does not correspond to the scale of the Russian economy. Especially taking into account the fact that in the Russian Federa-

tion they are essentially natural monopolies, occupying up to 80-90% in the relevant markets (oligopolistic market).

Previously, import-oriented industries are moving to domestic, often lower-quality components, as a result of which the level of internal competition is reduced. This is especially noticeable in government procurement and tenders, in which competition, in the absence of large foreign applicants, almost completely enters the "shadow" sphere, that is, grants and tenders are almost impossible to win in the absence of proper administration in the tender committee itself.

On the other hand, in the food industry, in the conditions of withdrawal from the market of large foreign players, the competition between small producers (especially the market of Moscow and Moscow region) has increased significantly. As examples, we can cite the expansion of the Kirzhach dairy factory to a store near the Moscow region.

With the departure of foreign investors, investment in industrial facilities and infrastructure as a whole has declined, which has a negative impact on the business environment¹. Also, the departure of foreign investors from special economic zones: technology parks, special economic zones, seaside regions, regions with a special level of taxation (Kalmykia, Adygea, Jewish Autonomous Region) - hit the possibility of regional development and sustainable territory marketing (image components, investment attractiveness, level fame and as a result credit rating).

Analyzing the data of international credit and analytical agencies (Fitch Ratings, Moody's, etc.), the credit rating of Russia gradually decreased from A + to B and even B- (from 2010-2017), which is associated with the risks of foreign agents in the Russian Federation and the so-called index of "economic freedom."

Let us consider in more detail the activities of Russian TNCs. Despite the sanctions and political confrontation with the West, leading transnational companies are not hurrying to leave the Russian market. With the exception of isolated cases of cessation of activities, they continue to build their business quite successfully, by opening subsidiaries or entering the capital of domestic enterprises.

As a negative example, the experience of the American automaker General Motors: after 20 years of presence in our market, management decided to curtail their activities and preserve the car manufacturing plant, citing sanction risks and a sharp decline in sales. At the same time, other major American corporations, such as Ford Motor or General Electric, were not afraid of possible difficulties and did not refuse investment plans.

In total, over 63 thousand companies in the real sector with foreign participation in capital currently operate in Russia, which once again proves the active integration of the domestic economy into the global market. Moreover,

¹ Deloitte. Overview of the Russian manufacturing sector. – URL: <https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/manufacturing/russian/russian-manufacturing-market-review-2016.pdf> (accessed: 20.04.2019).

their production sites are being developed by the grandees of the world economy - 10 enterprises from the top 50 organizations in terms of global revenue, directly owning subsidiaries not only around the world but also in the Russian Federation (table 2.4).

Table 2.4. — The largest TNCs in the world doing business in Russia in 2017¹

No	Company, country of headquarters	Main activity	Revenue, billion dollars USA, 2017	Place in the global ranking by revenue, 2017	Place in the global ranking by revenue, 2017	The number of subsidiaries in Russia in the direct ownership
1	Royal Dutch Shell, Great Britain	Raw petroleum and natural gas extraction	305.4	6	1244	6
2	Volkswagen, Germany	Manufacture of motor vehicles	287.9	8	1010	11
3	BP, Great Britain	Manufacture of refined petroleum products	240.6	9	915	3
4	Exxon Mobile Corp, USA	Manufacture of refined petroleum products	237.2	10	351	1
5	Daimler, Germany	Manufacture of motor vehicles	200.2	14	527	9
6	Ford Motor, USA	Manufacture of motor vehicles	156.8	20	140	1
7	Samsung Electronics, The Republic of Korea	Manufacture of electronic parts and devices	151.3	24	230	6
8	Total, France	Raw petroleum and natural gas extraction	149.3	25	1009	9
9	General Electric Company, USA	Production of industrial equipment, engines, electric turbines	120.5	38	797	2
10	Toyota Motor Corporation, Japan	Manufacture of motor vehicles	114.9	43	564	3

The range of interests of foreign corporate investment is very wide - field development, hydrocarbon production, automotive, power engineering, petrochemistry, consulting, banking services (table 2.5).

Russia is too important a market to abandon it. For transnational corporations, our country remains a priority, despite all the difficulties and uncertainties that have arisen because of the situation in Ukraine. Many are ready to open a business here, update or expand existing capacities, as well as create new jobs, which testifies to the economic prospects that have been gained over the years of trust. Western Europe and the USA remain the main investors in the Russian economy, which confirms the existence of a wide range of subsidiaries.

¹ Aftershock. The largest multinational corporations in the Russian market. – URL: <https://aftershock.news/?q=node/685969&full> (accessed: 20.04.2019).

Table 2.5. — Projects implemented by TNCs in Russia in 2017¹

№	Company	Brief description of the project
1	Royal Dutch Shell	<ul style="list-style-type: none"> - development of deposit fields on Sakhalin island's shelf, development of the Salym group of oil fields (Khanty-Mansiysk autonomous district - Yugra), as well as participation in the Caspian pipeline consortium - a net of "Shell" gas-filling stations - manufacturing complex of "Shell" lubricants in Torzhok, sales of petrochemical products - consulting services
2	Volkswagen	<ul style="list-style-type: none"> - car manufacturing plant of Volkswagen Tiguan, Volkswagen Polo and SKODA Rapid in Kaluga - car engines manufacturing plant in Kaluga - car manufacturing plant of Volkswagen Jetta, SKODA OCTAVIA and SKODA KODIAQ in Nizhny Novgorod
3	BP	<ul style="list-style-type: none"> - development of Srednebotuobinskoe oil/gas-condensate field (Yakutiya republic) - geological exploration in Western Siberia and Yenisei-Hantang river basin on the total area of about 260 thousand sq. km., drilling. - joint with "Rosneft oil company" project on development of mineral resources of Yamalo-Nenets Autonomous district within kharampur and Festival license areas with total geological reserves of more than 880 billion sq. m. of gas.
4	Exxon Mobile Corp	<ul style="list-style-type: none"> - exploration and development of the Sakhalin-1 project. - realization and marketing of motor oils "Mobil 1", "Mobil Delvac 1" and "Mobil SHC"; realization of petrochemical products - participation in the Caspian pipeline consortium.
5	Daimler	<ul style="list-style-type: none"> - Truck production of Mercedes-Benz Sprinter Classic at the plant «GAS» in Nizhny Novgorod, as well as diesel engines for them in Yaroslavl - Construction of a plant for Mercedes Benz cars production
6	Ford Motor	<ul style="list-style-type: none"> - car manufacturing plant of Ford Focus and Ford Mondeo in Vsevolozhsk (Leningrad region) - car manufacturing plant of Ford Explorer, Ford Kuga and Ford Transit; car engine manufacturing plant in Elabuga (Tatarstan) - car manufacturing plant of Ford Fiesta and Ford EcoSport in Naberezhnye Chelny (Tatarstan)
7	Samsung Electronics	<ul style="list-style-type: none"> - manufacturing plant of TVs, washing machines, monitors Samsung Electronics in the Kaluga region
8	Total	<ul style="list-style-type: none"> - oil extraction under the terms of the production sharing agreement (PSA) at the Kharyaga oil field (Nenets Autonomous district) - Participation in the project «Yamal-NGC» and the development of the Termokarstovoye gas field in Yamalo-Nenets - Construction of a plant for the production of lubricants in Kaluga region
9	General Electric Company	<ul style="list-style-type: none"> - Joint production, assembly, sale and maintenance of highly efficient industrial gas installations in Rybinsk (Yaroslavl region)
10	Toyota Motor Corporation	<ul style="list-style-type: none"> - car manufacturing plant of Toyota Camry and RAV4 in St. Petersburg - banking business - "Toyota Bank" public company.

The experience of investing domestic companies in foreign enterprises is small, Russian investors are inferior in terms of the volume of investments to global transnational corporations. However, since the 90s, the period of the formation of the Russian business, many enterprises have firmly stood on their feet and began to open representative offices abroad or to buy the foreign business by entering into capital.

Leaders in the number of investments in foreign assets are mainly in energy companies. They own about 80% of Russian assets abroad

The main direction of expansion of Russian capital remains Western Europe, with which economic relations traditionally hold the first place for us, regardless of events on the stock exchanges and the political arena.

Russia's investment activity – as well as the growing expansion of China, as well as some rich oil-producing Arab countries - is not welcomed by

¹ Aftershock. The largest multinational corporations in the Russian market. – URL: <https://aftershock.news/?q=node/685969&full> (accessed: 20.04.2019).

everyone. In Europe and the United States, there are increasing signs of protectionism.

Russian-owned companies are not yet large-scale by world standards: the most significant of them, the German WINGAS, at the end of 2017, has revenue of \$ 18 billion. For comparison, the largest company in terms of turnover in the world - American Walmart - 500 billion US dollars.

The largest foreign companies (Top-10) which main part of the capital (more than 50%) belongs to the Russian business are presented in table 2.6. The countries – offshore and also the states and territories – low tax jurisdictions are excluded from the rating.

Table 2.6. — The largest foreign companies in terms of revenue, owned by Russian business with participation in the capital of more than 50% in 2017¹

No	Company	Country	Revenue, billion dollars USA, 2017	Industry	Parent company or ultimate owner
1	WINGAS	Germany	18.0	fuel-and-energy company	PAO GAZPROM
2	Isab	Italy	3.6 (2016)	fuel-and-energy company	PAO LUKOIL
3	Lukoil Neftohim Burgas	Bulgaria	3.4	fuel-and-energy company	PAO LUKOIL
4	Beltransgaz	Belarus	3.0 (2015)	fuel-and-energy company	PAO GAZPROM
5	Gefco France	France	2.8	Transport, logistics	OAO RZHD
6	Gazprom Marketing & Trading Limited	Great Britain	2.8 (2016)	Trade	PAO GAZPROM
7	Universal Cargo Logistics Holding	Netherlands	2.5	Transport, logistics	Lisin Vladimir Sergeevich
8	Uralkali Trading	Latvia	2.5	Trade	PAO URALKALI
9	Naftna Industrija Srbije (NIS)	Serbia	2.4	fuel-and-energy company	PAO GAZPROM NEFT
10	Oy Teboil Ab	Finland	2.3	fuel-and-energy company	PAO LUKOIL

Despite the fact that Russia is actively attracting the largest TNCs to its market, there are a number of problems involving the participation of transnational corporations in our economy. All these problems are associated with the provision of conditions to foreign transnational corporations to carry out their activities in our country. In order to study in more detail the list of problems and barriers to the effective functioning of TNCs in Russia, it is advisable to classify these problems on a number of grounds.

In General, we can highlight the following main barriers to foreign investment in Russia:

1. Problems of a legal nature are acutely manifested in the inability to apply current legislation to current trends in the functioning of TNCs;
2. The legislation of the Russian Federation does not contain special rules regulating the activities of foreign TNCs directly, which is absolutely insufficient;

¹ Aftershock. The largest multinational corporations in the Russian market. – URL: <https://aftershock.news/?q=node/685969&full> (accessed: 20.04.2019).

3. The excessive protectionist orientation of the Russian government, which creates obstacles for foreign investors to access domestic markets;

4. Factors constraining the entrepreneurial activity of TNK: lack of protection of property rights, the threat of organized crime and the corruption component. In this regard, we can cite the position of Russia in such ratings as Doing Business, Transparency International e.V., Index of Economic Freedom (Appendix №3);

5. The disadvantages of the tax system, which I can not find the optimal tax rate even for domestic TNCs, not to mention international companies;

6. The special requirements of affiliated subsidiaries and dependent companies of international TNCs as of the following legal form and especially in their activities;

7. Excessive bureaucratic decision-making about investment projects that disorient and discourage foreign TNCs. It also manifests itself in restricting the access of foreign representatives to national contracts and competitions (administrative measures).

8. According to a study by Ernst & Young, investors find the investment climate in Russia attractive, but risky. They are worried about three key areas: transparency in business (29%), political stability (21%), and interaction with state bodies.

9. Geographic problems are associated primarily with the localization of TNCs and their distribution. Branches of foreign TNCs in Russia are located very unevenly.

After analyzing the key problems, we can single out a number of directions for and their solution:

– first, it is necessary to eliminate the discrepancy between the interests of the host country and foreign TNCs operating in this country - problems of an economic nature. In the case when the interests of transnational capital for objective reasons coincide with the interests of certain states, it can provide them with significant advantages in international economic competition and a positive synergistic effect;

– secondly, it is necessary to eliminate the contradictions between national and international capital (it is possible to create transnational capital and regional development without reference to the interests of individual countries). In the framework of BRICS, this would serve as a good incentive for the development of international relations.

As well as Russia in its Euro-Asian region, Brazil is the largest player in the Latin American market and its closest competitors are Argentina and Mexico (the United States also belongs to the Americas region, but its economy is always considered separately). That is why Brazilian corporations are the largest in the South American market and are actively exhibiting in the North American market (foodstuff), as well as in the markets of Asian countries (advanced genetic engineering and biotechnology). Of course, the use of natural resources, especially oil, is an important part of the Brazilian economy.

Consider the main Brazilian corporations and the areas of their activities presented in table 2.7.

Table 2.7. — The main Brazilian corporations and the areas of their activities in 2019¹ (compiled by the author)

Names of Brazil's largest TNCs	Characteristics of Brazil's largest TNCs
Tectoy	Brazilian company engaged in the distribution and development of video games and game consoles, as well as various household electronic devices. Distributor of Sega video game products in Brazil.
SADIA	The leader of the Brazilian market of meat and frozen products (as well as one of the world leaders in this market). Exports to Asia, Europe, and the Middle East account for more than half of the company's sales. This year, Sadia announced a merger with its main competitor Perdigao, forming BRF company — food products of Brasil.
Petrobras	The Brazilian oil company, the controlling stake of which (55.7 %) belongs to the government of Brazil. The company operates in 18 countries: Angola, Argentina, Bolivia, Colombia, Nigeria, USA, etc
Banco do Brasil S.A.	The largest Bank in Latin America by assets. It was founded in 1808, so it is considered the oldest in Brazil and one of the oldest in Latin America. The Bank is controlled by the state, but its shares are traded on the Sao Paulo Stock exchange.
COMPANHIA VALE DO RIO DOCE (VALE)	One of the world leaders in the extraction of iron ore. It is one of the first mining companies to diligently transform the ingredients of mineral resources into the daily lives of people. The company's headquarters is located in Brazil, where more than 100 thousand employees, including external workers, work.
EMBRAER	(Empresa Brasileira de Aeronautica) Embraer — Brazilian aircraft engineering company, which is one of the leaders in the global market of regional passenger aircraft. Embraer produces commercial, corporate, military, agricultural aircraft. All production facilities are concentrated in Brazil. In 2006, the company was the third largest supplier of commercial Airliners in the world after Boeing and Airbus. The number of personnel is 17 thousand people.

In general, the problems and development prospects of Brazilian TNCs are determined by the strengths and weaknesses of the Brazilian economy. Despite state support measures, the level of business transparency and regional economic policies are still dominant for the possibility of expanding the integration links between TNCs representing the BRICS countries.

Let's consider the key opportunities and threats to the activities of Brazilian TNCs, which are presented in table 2.8. For these purposes, we used the SWOT analysis methodology and, based on its results, made conclusions about the relationship between strengths and weaknesses, as well as opportunities and threats.

¹ Top-personal. The largest enterprises and well-known businessmen of Brazil. – URL: <http://www.top-personal.ru/issue.html?2196> (accessed: 20.04.2019).

Table 2.8. — SWOT Analysis of Brazilian TNCs (compiled by the author)

Strengths		Weaknesses	
Rating	Parameter	Rating	Parameter
1	High potential for expansion product markets, due to the presence of a large number of non-covered population in peripheral areas	1	The high level of corruption and the result is an insufficient credit rating of the country
2	A significant level of the resource base (sea, forest, agro-industrial, coal, including sea shipping and sea containers)	2	The complex geographical structure of the country, impeding the transport of goods, services and data exchange
3	Since Brazil is a developing country, it is easier for it to achieve high rates of economic growth	3	Traditional orientation of the country to the agricultural sector (for example, banana plantations)
4	Developed trade turnover with countries (especially BRICS)	4	High climatic and environmental risks
5	High level of management in Brazilian corporations	5	Political instability
Opportunities			
Rating	Parameter	Rating	Parameter
1	Creating new jobs through the development of TNCs (to overcome the high level of unemployment)	1	High unemployment and low income of the population, is the reason for the high crime rate
2	Low level of employment in the market of innovative goods, services and prospects for attracting Russian TNCs to the market (besides the oil and gas sector)	2	Restrictive measures with countries of Latin American international organizations (MERCOSUR) limiting customs liberalism to protect the interests of the domestic market
3	The prospect of using renewable resources and renewable energy (the sun)	3	Positive changes in the inflation rate in the country
4	The prospect of changes in the interest rate of the Central Bank of Brazil, which will entail attracting new investors	4	Negative changes in the exchange rate (Brazilian real)
5	Opportunities for growth of purchasing power of the population	5	The threat of economic stagnation
Threats			

According to the results of the SWOT analysis, the following conclusions can be drawn:

1. The advantage of integration with the BRICS countries prevails over the advantages of restrictive domestic-national measures (MERCOSUR);
2. Brazilian TNCs have great growth potential: a high potential for increasing the purchasing power of the population and the geographical reach of potential markets. However, these initiatives still face insurmountable internal problems of the country (corruption);
3. Prospects for cooperation with Russian TNCs are interesting to Brazil, first of all, by the possibilities of mutual technology transfer to global value chains.

For a more detailed understanding of the operating conditions of TNCs, we will analyze the political, social, economic and technological environment using the PEST analysis method presented in table 2.9. To ensure the objectivity of the PEST analysis, 5 independent experts were chosen who represent an interest in the field of TNCs whose scientific works correspond to the direction of preparation: M. V. Tumin (Moscow Polytechnic University), E. V. Zenkina. (Russian University of Transport (MIIT)), M. A. Petrosyan (Bauman Moscow State Technical University), P. A. Kostromin (Moscow Polytechnic University), I. A. Nazarova (Russian Technological University (MIREA)). Experts evaluate, firstly, the importance of the indicators under consideration by aspects of the activity, and secondly, the possibility of changing these indicators in terms of a positive impact on the business development environment.

In General, according to the results of the analysis, the highest level of risk and significance is represented by the political and social spheres, when, in terms of economic and technological parameters, Brazilian TNCs can compete with Russian producers of similar products (only if it does not concern the oil industry).

Brief results of the analysis are presented in the table 2.9.

For a final comparison of the conditions of TNC activities in Russia and Brazil, we will draw up a table of competitiveness analysis, which is the pairwise combination of the most significant economic indicators for the countries under consideration, especially against the background of the selected world leader (by which we can choose the United States) table 2.10.

Table 2.9. — PEST Analysis of Brazilian TNCs (compiled by the author)

Factor description	Factor influence	Expert evaluation					Average mark	Average score adjusted for factor weight
		1	2	3	4	5		
POLITICAL FACTORS								
Bureaucratization and level of corruption	3	1	2	1	1	2	1,4	0,11
Freedom of information and media independence	2	1	2	2	1	2	1,6	0,09
Quantitative and qualitative restrictions on imports, trade policy	2	4	5	3	4	3	3,8	0,21
Quantitative and qualitative export restrictions, trade policy	2	3	2	2	1	3	2,2	0,12
ECONOMIC FACTORS								
Economic growth rate	3	4	3	4	4	5	4,0	0,32
Degree of globalization and economic openness	3	5	4	4	3	4	4,0	0,32
Level of the banking sector development	2	3	3	4	2	4	3,2	0,17
Level of the population disposable income	2	2	3	3	3	2	2,6	0,14
SOCIO-CULTURAL FACTORS								
Level of health and education	3	2	3	3	2	2	2,4	0,19
Attitude to work, career, leisure and retirement	1	1	1	1	1	1	1,0	0,03
Lifestyle and consumption habits	2	2	2	3	1	2	2,0	0,11
Attitude to natural and environmentally friendly products	3	3	3	2	3	4	3	0,24
TECHNOLOGICAL FACTORS								
Level of innovation and industry technological development	3	3	3	3	4	3	3,2	0,26
R&D costs	3	4	4	5	4	5	4,4	0,36
Access to the latest technology	2	3	4	5	2	4	3,6	0,19
Degree of use, implementation and transfer of technology	1	3	3	3	4	2	3	0,08
TOTAL	37						45,4	

Table 2.10. — Competitiveness table in 2017⁹⁸ (compiled by the author)

Indicator	Russia	Brazil	United States	Unit
Inflation	3,4	3,55	2	Percent
Interest rate	7,75	6,5	2,5	Percent
GDP	1578	2056	19391	USD bln
Trade balance	15,67	4,99	-55	USD bln
Unemployment rate	4,9	12,4	3,7	Percent
Index of competitiveness	65,62	59,51	85,64	Point
State budget (% of GDP)	-1,5	-7,8	-3,5	Percent of GDP

According to the results of the analysis of this table and in general in 1 chapter, the following conclusions can be made:

1. There is a close relationship between the performance indicators of TNCs and the performance indicators of countries as a whole, and there is a positive correlation with the feedback here. State measures to support the corporation contribute to an increase in their socio-environmental and economic indicators, and the result of the activities of TNCs with a turn will increase the competitive ability and investment attractiveness of the state in its regional and territorial consideration in the international market. That is why our main task in Chapter 3 will be - a description of the direction and closeness of the correlation between the various indicators of the activities of TNCs in the markets of Brazil and Russia, including their relationship with the general economic indicators of states.

2. Brazilian and Russian TNCs are emerging markets with high growth potential. Consequently, the data that will be obtained as a result of the correlation regression analysis can be used to increase both the general economic level and the level of sustainable development considered in the work of states.

3. Nowadays, Brazil is an important partner of the Russian Federation with common interests in space technology, military equipment, communication technology and in other segments. In recent years, Brazil has firmly taken the first place in Russia's trade turnover with the countries of Latin America, being also one of Russia's important partners in the world.

4. In general, Russian and Brazilian TNCs face similar problems: the geographical complexity of activities, corruption, periodic bursts of protectionist measures, a low level of public confidence in their own government. Common competitors: the US and Western European corporations. In this regard, it is interesting to look for a point of contact and interdependence to increase the penetration of TNCs into the economies of the BRICS countries.

5. In most inequality measures, Brazil in the BRICS occupies a position between Russia and China, but in most cases overtaking India and South Af-

⁹⁸ UNCTAD. Country profile. – URL: <https://unctadstat.unctad.org/CountryProfile/GeneralProfile/en-GB/643/index.html> (accessed: 20.04.2019).

rica. For example, in 2015, the R/P coefficient of funds in Brazil was 36.8 times, in Russia - 10.6, in China - 15.7, and in India and South Africa - 57.0. In general, it can be said that the Brazilian economy (as well as the Russian) in fact, at present, the country is experiencing two problems: the traps of the average level of development and unstable economic growth.

6. The absence of strong competition in high value-added industries is due only to the relative weakness of Russian firms. In the case of any successful modernization of Russian industry, it is TNCs from large developing countries that may become one of the main competitors for domestic companies in global markets.

Chapter 3. THE MAIN DIRECTIONS OF IMPROVEMENT OF TNC ACTIVITIES IN THE MARKET OF DEVELOPING COUNTRIES AND COUNTRIES WITH ECONOMIES IN TRANSITION (ON THE EXAMPLE OF BRAZIL AND RUSSIA)

3.1. Correlation analysis of the dependence of the economy of Russia and Brazil on FDI and foreign trade turnover

To characterize the influence of TNCs on the economy of the Russian Federation and Brazil, it is certainly necessary to take into account many factors, GDP as a key indicator of the economy itself is not a self-sufficient indicator, but depends on many factors, each of which affects each other. In the most popular model, the definition of GDP by income and expenditure, it depends on the balance of payments, gross savings of the population, investments government expenditures. However, each of these indicators, in turn, in the framework of factor analysis, there may be a discrepancy into smaller indicators, up to the performance indicators of individual TNCs.

Of course, in our work, we cannot capture all the variety of dependent factors, but such a goal in the work is not set. To characterize the influence of TNCs on the economy of the countries under consideration, we use a two-factor model, instead of the classical four-factor model, this is the balance of payments (calculated as the difference between exports and imports) and FDI (the balance between imports and exports of investment funds into the country⁹⁹).

To determine the degree of influence of indicators, it is convenient to use correlation analysis - it is convenient for establishing the degree of closeness of the relationship between the two parameters. This indicator is purely mathematical, but for its analysis, it is necessary to understand the reason for the relationship between cause-and-effect. That is, if we have variables X and variables Y, we can determine the Correlation ratio between X and Y.

However, this indicator does not show whether X depends on Y or Y on X. For this purpose, the analysis cannot be carried out exclusively by machine but must be analyzed in terms of semantic and cause-effect relationships.

⁹⁹ Fomina L. B. The Influence of transnational corporations on the economy of host countries // Economics– 2017 - № 2(23), - p. 27-30.

In this regard, let us characterize the hypothesis of our study: the level of FDI in a country and a positive trade balance have a positive direct relationship with the GDP indicator of the country of Russia and Brazil. At the same time, in the framework of this study, the opposite may be proved or such a connection may not be detected. However, in any case, the result of such research will have a scientific novelty. Moreover, we characterize the dynamics of trade relations between Brazil and the Russian Federation, and their influence on economic indicators of the considered countries¹⁰⁰.

Let us characterize the research methodology: a correlation is a relationship attempts to measure the strength of the relationship between two variables and "grades" the strength of the relationship between them. For example inflation and price changes. The practical significance of establishing a correlation relationship is the Identification of a cause-effect and the strength and direction of a linear relationship between two random variables.

The value characterizing the direction and strength of the relationship between the random variables is the correlation coefficient, which by one number gives an idea of the direction and strength of the connection between the variables, the limits of its fluctuations from 0 to ± 1 . Correlation analysis can be carried out graphically, in which case a Scatter diagram is drawn and the correlation coefficient itself is determined.

Correlation can be both direct and inverse. The strength of the correlation connection is presented in table 3.1¹⁰¹.

Table 3.1. — Estimation of correlation coefficient (compiled by the author)

Strength of Relationship	The direction of the relationship	
	Positive	Negative
Strong	+1 to +0.7	-1 to -0.7
Moderate	+0.699 to +0.3	-0.699 to -0.3
Weak	+0.299 to 0	-0.299 to 0

The correlation can be determined by two methods: the square method (The Pearson correlation assumptions) and the rank method (Spearman's rank correlation coefficient). Let us briefly describe each of these methods:

The conditions of application of the method of Spearman's rank correlation coefficient: when there is no need to establish the exact strength of a link between variables, but rather tentative data; when features are presented not only quantitative but also attribute values; when probability distribution series of signs have open variants (for example, work experience up to 1 year, etc.)

¹⁰⁰ Investment relations of BRICS countries: present state and prospects // Regional Economics and management: electronic scientific journal №2 (50), - 2017 – URL: <https://eee-region.ru/article/5021/> (accessed: 20.04.2019).

¹⁰¹ Correlation analysis. Using MS Excel for calculation correlation coefficient. – URL: <https://medstatistic.ru/articles/correlacia.pdf> (accessed: 20.04.2019).

Algorithm of calculation:

1. to make two data sets comparable features, denoting the first and second data sets, respectively, X and Y. At the same time, rank the data in ascending order;
2. rank is achieved by assigning a rating of "1" to the largest number in the column, "2" to the second largest value, and etc. The lowest value in the column will receive the lowest rating. It should be made for both sets of measurements. With the same characteristic values in the series, ranks should be determined as an average of the sum of the ordinal numbers of these values.
3. determine the difference of ranks between X and Y (d): $d = X - Y$
4. square the resulting difference in the rank (d^2) o get the sum of the squares of the difference ($\sum d^2$) and substitute the obtained values in the formula 3.1:

$$p_{XY} = 1 - \frac{6 \sum d^2}{n(n-1)} \quad (3.1)$$

The conditions of application of the method of Pearson correlation assumptions: when the precise determination of the strength of the relationships between variables; when both variables have an only quantitative expression (other assumptions include linearity and homoscedasticity).

Algorithm of calculation:

1. construct random variables for each our data, denoting the first and second series of numbers, respectively, X and Y;
2. determine for each variables average values (M1 and M2);
3. find deviations (d_x and d_y) of each numerical value from the average value of its variation range;
4. multiply received deviations ($d_x \times d_y$);
5. square and sum each deviation for each variety ($\sum d_x^2$ and $\sum d_y^2$);
6. substitute the obtained values in the formula for calculating the correlation coefficient (formula 3.2):

$$r_{XY} = \frac{\sum(d_x \times d_y)}{\sqrt{(\sum d_x^2 \times \sum d_y^2)}} \quad (3.2)$$

Using both methods involves finding the degree of strength of the relationship between the variables, as well as the percentage of possible errors caused by random data fluctuations. To avoid the incorrect display of data, we will use the appropriate statistical tools: for example, T-Test (Student's T-Test).

Let's characterize the methodology and algorithm for determining the percentage of error. The calculation of the error of the correlation coefficient - calculated by the method of Pearson correlation assumption (formula 3.3):

$$m_{r_{xy}} = \sqrt{\frac{1-r_{xy}^2}{n-2}} \quad (3.3)$$

The calculation of the error of the correlation coefficient - calculated by the method of Spearman's rank correlation coefficient (formula 3.4):

$$m_{p_{xy}} = \sqrt{\frac{1-p_{xy}^2}{n-2}} \quad (3.4)$$

Estimate the significance of the correlation coefficient obtained by the method of Pearson correlation assumption and Spearman's rank correlation coefficient.

Method 1 - Significance is determined by the formula 3.5:

$$t = \frac{r_{xy}}{m_{r_{xy}}} \quad \text{or} \quad t = \frac{p_{xy}}{m_{p_{xy}}} \quad (3.5)$$

The t-distribution is estimated by the table of t values, taking into account the number of degrees of freedom ($n - 2$), where n is the number of paired variants. The t-distribution must be equal to or greater than the table value corresponding to the probability $p \geq 99\%$.

Method 2 - Significance is estimated using a special table of standard correlation coefficients. At the same time, such a correlation coefficient is considered to be significant when, for a certain number of degrees of freedom ($n-2$), it is equal to or more than a tabular one, corresponding to an error-free forecast of $p \geq 95\%$.

For the purpose of this work, the Pearson correlation assumption method was chosen, since all our data can be obtained from the official - static reports of the countries under consideration. In addition, all the data used have a numerical expression without integral values and qualitative features (for example, expert evaluation).

Let's characterize the information sources for selecting data for the Russian Federation Brazil:

- investment data - Federal State Statistics Service ((Rosstat), The Central Bank of the Russian Federation (CB), Central Bank of Brazil;
- data on foreign trade balance between Russia and Brazil - Federal Customs Service and ITC - Trade Map; Brazil Institute.

For the beginning, we will conduct a correlation analysis for the Russian Federation – the initial statistical data are presented in table 3.2.

Table 3.2. — Initial statistical data of the Russian Federation (1999-2018)¹⁰².

Year	GDP (bln ₺)	FDI (mln \$)	Exports (mln \$)	Imports (mln \$)
1999	4823,2	-1 091	72885	30278
2000	7305,6	501	103093	33880
2001	8943,6	-306	99969	41883
2002	10830,5	59	106712	46177
2003	13208,2	1 795	133656	57347
2004	17027,2	-1 621	181600	75569
2005	21609,8	2 372	241473	98708
2006	26917,2	-7 602	301244	137807
2007	33247,5	-11 072	351928	199753
2008	41276,8	-19 120	467581	267101
2009	38807,2	6 697	301667	167348
2010	46308,5	9 448	397068	228912
2011	60282,5	11 767	516718	305760
2012	68163,9	-1 765	524735	317263
2013	73133,9	17 288	525976	315298
2014	79058,5	35 051	497359	287063
2015	83094,3	15 232	343512	182902
2016	86014,2	-10 225	285674	182267
2017	92101,3	8 200	353028	238008
2018	103875,8	23 112	449 964	238 151

1. Determine the average value (median) of each of the considered variables by the formulas 3.6 and 3.7:

$$M_x = \frac{\sum X}{n} \quad (3.6)$$

$$M_y = \frac{\sum Y}{n}, \quad (3.7)$$

where M_x , M_y - this is the median value of the selected range of variables;

$\sum X$, $\sum Y$ - the sum of the values of variables for all considered periods (or for all measurements);

n - number of periods considered (number of measurements).

For the calculation in the Microsoft Excel editor, was used the function "AVERAGE", the results of the calculation of median values are presented in table 3.3.

Table 3.3. — The median values of economic indicators of the Russian Federation (1999-2018) (compiled by the author)

Indicator	GDP (bln ₺)	FDI (mln \$)	Exports (mln \$)	Imports (mln \$)
Median value	45801,5	3936.00	312792,075	172573,73

¹⁰² Rosstat. Russia in numbers. — URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_113_5075100641 (accessed: 20.04.2019).

2. For each year and for each variable, we determine the deviation of the actual value from the average by simply arithmetic difference (formula 3.8):

$$d_x = X - M_x , \quad (3.8)$$

where d_x - actual value deviation from median;
 X - the actual value of the variable;
 M_x - median value.

The results of the calculation of deviations are presented in table 3.4.

Table 3.4. — The value deviation from the median (1999-2018)
 (compiled by the author).

Year	GDP (bln ₺)	FDI (mln \$)	Exports (mln \$)	Imports (mln \$)
1999	-40978,3	-5026,8	-239907,1	-142295,7
2000	-38495,9	-3435,2	-209699,1	-138693,7
2001	-36857,9	-4242,3	-212823,1	-130690,7
2002	-34971,0	-3877,0	-206080,1	-126396,7
2003	-32593,3	-2140,7	-179136,1	-115226,7
2004	-28774,3	-5557,0	-131192,1	-97004,7
2005	-24191,7	-1564,4	-71319,1	-73865,7
2006	-18884,3	-11537,6	-11548,1	-34766,7
2007	-12554,0	-15008,5	39135,9	27179,3
2008	-4524,6	-23056,3	154788,9	94527,3
2009	-6994,3	2761,4	-11125,1	-5225,7
2010	507,0	5512,5	84275,9	56338,3
2011	14481,0	7831,1	203925,9	133186,3
2012	22362,4	-5701,2	211942,9	144689,3
2013	27332,4	13351,6	213183,9	142723,8
2014	33257,0	31114,9	184566,6	114489,0
2015	37292,8	11296,1	30719,7	10328,6
2016	40212,7	-14160,6	-27118,1	9693,4
2017	46299,9	4263,5	40235,9	65434,3
2018	58074,3	19176,5	137171,9	65577,3

3. It is found to calculate the product of the deviations of the resulting variable and the factors affecting it. For the convenience of further calculations, we will replace the economic indicators with the letters: GDP=Y, FDI = X_1 , Export = X_2 , and Import = X_3 . The calculation is carried out according to the following formula 3.9:

$$P = d_Y \times d_{X_n} , \quad (3.9)$$

where P - a product of the resulting and factorial variables;
 d_Y - the deviation of the resulting variable; resulting variable
 d_{X_n} - the deviation according to 1, 2 and 3 factorial variables.

The results of the calculation of the sums of the products of deviations are presented in table 3.5.

Table 3.5. — The sums of the products of deviations (1999-2018)
(compiled by the author)

	$d_y \times d_{x1}$	$d_y \times d_{x2}$	$d_y \times d_{x3}$
1999	205990649,9	9830975284,2	5831031888,8
2000	132241609,0	8072544238,8	5339133093,8
2001	156361966,5	7844214678,3	4816987737,7
2002	135583157,2	7206825641,0	4420219638,9
2003	69771737,6	5838629206,9	3755615116,6
2004	159898283,8	3774960901,4	2791243777,5
2005	37846152,5	1725331898,9	1786939892,4
2006	217880080,0	218077259,8	656545199,9
2007	188416298,2	-491311759,1	-341208108,8
2008	104321682,4	-700365338,3	-427702585,5
2009	-19314043,7	77811869,7	36550209,5
2010	2795070,6	42731635,9	28566004,4
2011	113403093,3	2953060235,8	1928676198,9
2012	-127491330,7	4739549568,5	3235597353,4
2013	364931569,2	5826827950,0	3900982929,0
2014	1034786513,4	6138129892,7	3807558214,5
2015	421263913,3	1145624800,9	385181376,1
2016	-569435945,0	-1090491218,3	389796652,6
2017	197401408,2	1862917334,5	3029596954,8
2018	1113659620,9	7966164017,1	3808354286,9
Σ	3940311486,6	72982208098,9	49179665831,5

4. We find the squares of deviations for each of the considered variables and the resulting variable, and then we determine the sum of the found squares. The results of the calculation the sums of squares are as follows:

$$\Sigma d_y^2 = 19888995402,67$$

$$\Sigma d_{x1}^2 = 2990255063,88$$

$$\Sigma d_{x2}^2 = 464662027867,82$$

$$\Sigma d_{x3}^2 = 195701669679,98$$

5. We determine the product of the squares of the deviations by the resulting variable and the three resulting variable, after which we extract the square root of the resulting sum for each parameter. The calculation results are as follows:

$$\sqrt{\Sigma d_y^2 \times \Sigma d_{x1}^2} = 7\,711\,884\,932,90$$

$$\sqrt{\Sigma d_y^2 \times \Sigma d_{x2}^2} = 96\,133\,557\,804,03$$

$$\sqrt{\Sigma d_y^2 \times \Sigma d_{x3}^2} = 62\,388\,377\,191,28$$

6. The obtained values are substituted into Formula 3.2 for calculating the correlation coefficient. Then we determine the error of the correlation coefficient by Formula 3.4. The results are presented in table 3.6.

Table 3.6. — The results of the calculated correlation coefficient and error of correlation coefficient (compiled by the author)

	Γ_{YX1}	Γ_{YX2}	Γ_{YX3}
Correlation coefficient	0,51	0,76	0,79
Error of correlation coefficient	0,202613505	0,153415393	0,145030783

7. We determine the significance of the obtained correlation coefficient by Student's T-Test. To do this, we divide each of the three pairs of values obtained by the correlation coefficient by the error of the correlation coefficient, taking into account the table of confidence intervals with a probability of 95% according to the formula 3.5. The results of the calculation t-crit are presented in table 3.7.

Table 3.7. — The T-test calculation (compiled by the author)

	Γ_{YX1}	Γ_{YX2}	Γ_{YX3}
T-test	2,521747646	4,948493972	5,435277141

According to the results of the analysis, we can draw the following conclusion:

1. The relationship between GDP and FDI can be characterized as moderately positive - this is due to the fact that in the Russian Federation, GDP is largely determined not only by FD but by domestic investments of TNCs in the petrochemical industry. Therefore, with a high level of confidence, the model of dependence of GDP on FDI is not recommended, both for determining the current correlation, and for causation, and for extrapolation.

2. In contrast to FDI, the model of dependence on export and import, on the contrary, demonstrates a high level of interconnection - this is due to the high dependence of the Russian Federation on world energy prices (in particular, as a result of the fall in world oil prices from more than \$ 150 per barrel to less than \$ 40-50 per a barrel of real GDP by the Atlas method was reduced by more than 2 times, which led to a crisis in the country) as a result, for further regressive analysis for the Russian Federation, it is proposed to use the model of GDP dependence on exports and imports (the main share in exports is toil natural raw materials, imports its products).

Similar calculations were performed using the "Correlation" function in Microsoft Excel editor for a correlation analysis for Brazil. For the analysis, the same value pairs were used in the Russian Federation. Primary data for the analysis are presented in table 3.8.

Table 3.8. — Initial statistical data of Brazil (1999-2018)¹⁰³

Year	GDP (bln \$)	FDI (mln \$)	Exports (mln \$)	Imports (mln \$)
1999	599,3	-26 866	56 562	68 887
2000	655,4	-30 497	65 854	82 120
2001	559,4	-24 714	69 105	81 139
2002	507,9	-14 108	73 022	69 073
2003	558,3	-9 894	84 744	72 356
2004	669,9	-8 694	110 739	87 894
2005	891,6	-12 549	135 919	105 595
2006	1 107,6	9 420	159 213	129 231
2007	1 397,1	-27 518	186 202	167 163
2008	1 695,8	-24 601	229 517	232 731
2009	1 667,1	-36 032	180 891	187 613
2010	2 208,8	-55 626	237 189	260 183
2011	2 616,2	-86 360	299 972	320 100
2012	2 465,2	-90 485	288 507	322 014
2013	2 472,8	-59 567	287 593	344 505
2014	2 455,9	-67 107	270 458	335 826
2015	1 802,2	-57 200	232 476	253 714
2016	1 496,2	-58 684	224 279	217 764
2017	2 053,5	-50 905	218 541	151 379
2018	1 909,4	-52 234	239 522	181 201

To ensure the comparability of data, the same periods were used as in the Russian Federation, besides, the methods for calculating indicators (GDP at current prices, net FDI, etc.) were calculated for Russia and Brazil identically. The whole course of calculations is presented in Appendix №4 to the work.

The result of the correlation analysis, error of correlation coefficient and the determination of the T-coefficient are presented in table 3.9.¹⁰⁴

Table 3.9. — The results of the correlation analysis, error of correlation coefficient and the determination of the T-test (compiled by the author)

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According to the results of the analysis, we can draw the following conclusion: in Brazil, the relationship between net FDI and GDP is inversely proportional - this is due to the fact that most investments are made by Brazilian TNCs in other countries, notably the Latin American market, China and Africa. As a result, a strong inverse correlation (-0.84)

In general, the result of the correlation analysis shows a strong relationship between all three pairs of variables, including 0.97 and 0.94, which allows for the purpose of further regression analysis with a high level of confi-

¹⁰³ World Data Atlas. Brazil. – URL: <https://knoema.ru/atlas/Бразилия> (accessed: 20.04.2019).

¹⁰⁴ Student's t-distribution. – URL: <https://www.kontrolnaya-rabota.ru/s/teoriya-veroyatnosti/tablica-studenta/> (accessed: 20.04.2019).

dence to build polygonal GDP dependency models on exports and imports based on the constructed diagrams scattering pairs of value of statistical item.

For a more detailed analysis of the impact of TNCs on the economy, in the next paragraph, we consider the relationship between the globalization index of countries and the indicator of the development of their economies (GDP at current prices).

3.2. Correlation analysis of the globalization index and GDP of Brazil and the Russian Federation

In the first chapter, we looked at the global value chain as a key trend for the development of TNCs in the modern world, and therefore our hypothesis is that the development of GVC and TNCs in countries is characterized by the level of globalization in a particular country. That is, the higher the value of this index, the more so, firstly, the TNCs are more active in the selected country, and secondly, the greater the flow of TNCs capital from the country of localization to the country of the main activity. Thus, the index of globalization shows the level of development of TNCs, which in turn affects the country's GDP.

Consider the direction and strength of this relationship. The source of information for the globalization level of selected countries is the KOF Index of Globalization from the KOF Swiss Economic Institute, which has monitored this index since the 1990s for the largest countries in the world. Primary data on Russia are presented in table 3.10.

Table 3.10. — Initial data The Index of Globalization of Russia (1999-2018)¹⁰⁵¹⁰⁶.

Year	GDP (bln ₪)	The Index of Globalization
1999	4823,2	63,48
2000	7305,6	65,73
2001	8943,6	65,25
2002	10830,5	66,63
2003	13208,2	68,09
2004	17027,2	66,86
2005	21609,8	67,26
2006	26917,2	67,95
2007	33247,5	68,99
2008	41276,8	69,09
2009	38807,2	69,98
2010	46308,5	69,92
2011	60282,5	70,13
2012	68163,9	70,63

¹⁰⁵ KOF Globalisation Index. – URL: <https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html> (accessed: 20.04.2019).

¹⁰⁶ Rosstat. Russia in numbers. – URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1135075100641 (accessed: 20.04.2019).

2013	73133,9	71,43
2014	79058,5	70,87
2015	83094,3	72,2
2016	86014,2	72,29
2017	92101,3	68,25
2018*	103875,8	69,9

Note: 2018 * - the value of the index of globalization for 2018 is a predicted value since the report for 2018 by the KOF Swiss Economic Institute has not been published.

Correlation analysis was performed by the same method presented in paragraph 3.1. The results of the correlation analysis are presented in Table № 3.11 (intermediate results of calculations are presented in Appendix №5). As shown by calculations between GDP and the globalization index in the Russian Federation, there is a strong positive relationship (table 3.11)

Table 3.11. — The results of the correlation analysis, error of correlation coefficient and the determination of the T-test of Russia (compiled by the author)

	r_{YX1}
Correlation coefficient	0,803402884
Error of correlation coefficient	0,140345567
T-test	5,724462142

The error of the correlation coefficient and the value of Student's t-test indicate high veracity of the data obtained. As a result, we can conclude that this model can be used to predict the dynamics of the development of TNCs in the Russian economy.

Let us describe the data for Brazil, GDP and Index of globalization are presented in table 3.12.

Table 3.12. — Initial data The Index of Globalization of Brazil (1999-2018)¹⁰⁷¹⁰⁸¹⁰⁹¹¹⁰

Year	GDP (bln \$)	The Index of Globalization
1999	599,3	52,82
2000	655,4	53,12
2001	559,4	54,68
2002	507,9	55,69
2003	558,3	55,38

¹⁰⁷ World Data Atlas. Brazil. – URL: <https://knoema.ru/atlas/Бразилия> (accessed: 20.04.2019).

¹⁰⁸ KOF Globalisation Index. – URL: <https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html> (accessed: 20.04.2019).

¹⁰⁹ Fincan. Ranking of countries by GDP 2018. – URL: http://fincan.ru/articles/17_rejting-stran-po-vvp-2018/ (accessed: 20.04.2019).

¹¹⁰ Rambler Finance. Brazil's foreign trade turnover in 2018 reached the highest level in the last 5 years. – URL: <https://finance.rambler.ru/markets/41517962-oborot-vneshney-torgovli-brazilii-v-2018-godu-dostig-naivysshego-urovnya-za-poslednie-5-let/> (accessed: 20.04.2019).

2004	669,9	56,17
2005	891,6	57,53
2006	1107,6	58,07
2007	1397,1	59,23
2008	1695,8	58,91
2009	1667,1	59,32
2010	2208,8	60,57
2011	2616,2	60,44
2012	2465,2	60,55
2013	2472,8	60,18
2014	2455,9	60,82
2015	1802,2	59,2
2016	1496,2	59,24
2017	2053,5	61,4
2018*	1909,4	61

Note: 2018 * - the value of the index of globalization for 2018 is a predicted value since the report for 2018 by the KOF Swiss Economic Institute has not been published.

According to the results of the analysis, a strong positive relationship was established between the globalization index and GDP. The results of the calculations are presented in table 3.13.

Table 3.13. — The results of the correlation analysis, error of correlation coefficient and the determination of the T-test of Brazil (compiled by the author)

	r_{yx1}
Correlation coefficient	0,894170997
Error of correlation coefficient	0,10552994
T-test	8,473149862

As a result of the analysis, it can be stated with confidence that for the purposes of the extrapolation of the regression analysis, we can use both the export/import + GDP variable and the globalization index + GDP for both countries under consideration. The values of the correlation coefficient and the percentage of its error are at a sufficient level to put forward a further hypothesis about a specific equation of interrelations between pairs of considered variables which will allow not only extrapolation, but also scenario planning with a high degree of probability, which will be done in the final paragraph 3.3.

3.3. Regression analysis of the influence of TNCs on the economies of Russia and Brazil

Let us briefly describe the research methodology. Regression analysis is a simulation approach measured data and studying their properties. The study of the dependence of random variables leads to regression models and regression analysis based on sample data. Probability theory and mathematical statistics are only a tool for studying statistical dependence, but they do not aim at establishing a causal relationship¹¹¹

For a complete understanding of regression analysis, it is important to distinguish the following factors:

- dependent variable: this is the main factor you are trying to understand or predict;
- independent variables: these are factors which you assume will affect your dependent variable.

Numeric data usually have explicit (known) or implicit (hidden) among themselves. The first type of relationships is the indicators that are obtained by direct counting methods, i.e., are calculated according to previously known formulas, are clearly related. For example, GDP, which is a function of FDI, exports, imports, and savings.

The second type of relationships (implicit) is not known in advance. However, it is necessary to be able to explain and predict complex phenomena in order to control them. For example, the relationship between the index of globalization and the country's GDP.

In this paper, we will consider two types of mathematical models based on the export and GDP scattering diagram (explicit link) and the index of globalization and GDP (implicit link).

Mathematical models are built and used for three generalized purposes:

- for explanation;
- for prediction;
- for management.

In our work, the relationship between explicit and implicit indicators are significant, therefore, it would be advisable to find their mathematical expression in the form of a regression model and evaluate the statistical significance of the model.

The formulation of the regression analysis problem is formulated as follows: there are pairs of traits studied, data on pairwise comparisons of GDP and exports of Brazil over 20 years are presented in Table 3.8. In this aggregate, the GDP column corresponds to the indicator for which we need to establish a functional relationship with the parameters of the object and the environment represented by the Export column.

¹¹¹ Regression analysis. – URL: <https://center-yf.ru/data/stat/Regressionnyi-analiz.php> (accessed: 20.04.2019).

Required: establish a quantitative relationship between the variables and determinants. In this case, the task of regression analysis is understood as the identification of such a functional dependence of Brazil's GDP on exports, which best describes the available experimental data.

There are also the following assumptions in using the regression analysis model firstly, the data used in the regression analysis should be arbitrarily distributed, that is, the data samples should not depend on any external factor. Secondly, the processed data contains some errors (interference) due to measurement errors, the effect of an unaccounted random variable. Thirdly, the sample is representative of the prediction of logical inference, etc.

The solution to the regression analysis problem should be divided into several stages¹¹²:

1. Preliminary data processing - we collected data on Brazil's exports and GDP on the basis of data from the Federal Government Statistical Service of Brazil, which is presented in Table 3.8;
2. Selection of the type of regression equations;
3. The calculation of the coefficients of the regression equation;
4. Check of the sufficiency of the constructed function to the results of observations.

The regression analysis carried out by us was carried out in a number of areas: GDP was represented as a function of exports, imports, and FDI; regression analysis was carried out separately for each of the factors; the regression analysis was carried out with the help of Microsoft Excel Data "Анализ данных" by building a trend that is most suitable to reflect the existing relationship with R2. The selection was made from the following options:

1. Power function;
2. Logarithmic function;
3. Exponential function;
4. Polynomial function;
5. Linear function;

To begin with, a regression analysis was performed using the GDP-export model in the Russian Federation. Baseline data were presented earlier in table 3.2. To understand the direction of the trend, a scatter diagram was constructed (figure 3.1).

The coefficient of determination this model is 84%. As can be seen from the presented figure, there is a direct positive relationship between the GDP, which is located along the Y-axis and exports, which is located along the X-axis. A power function of the form $y = ax^b$ was chosen to characterize the relationship direction. Then the trend line was built.

¹¹² Correlation and Regression Analysis in Excel: Instruction Execution. – URL: <https://exceltable.com/otchety/korrelyacionno-regressionnyy-analiz> (accessed: 20.04.2019).

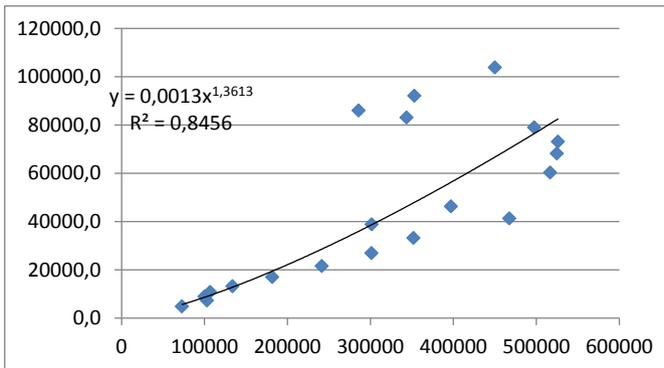


Figure 3.1. — Regression analysis of "Export-GDP" in Russian Federation (compiled by the author)

Based on this model, we can conclude that, with a significance of 84%, a 1 percent change in exports leads to an increase in GDP of 1.36%.

Consider the following model dependence of GDP on imports. Baseline data are presented in Table 3.2. To characterize the degree of relationship between variables, a power function was also used (figure 3.2).

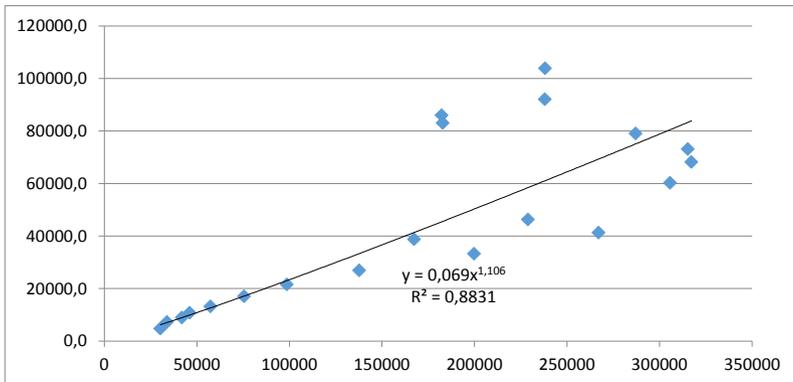


Figure 3.2. — Regression analysis of "Import-GDP" in the Russian Federation (compiled by the author)

According to the results of this figure, we can draw the following conclusion: with a change in imports by 1%, GDP will increase by 1.1%. The significance level of this model is 88%, which can also be interpreted as high.

The dependence of GDP on FDI and in the correlation analysis was not very significant at about 50%, therefore the dependence of these factors cannot be considered as sufficiently reliable and suitable for scenario planning.

$$y = -0,000000001x^6 + 0,000000001x^5 - 0,000000001x^4 - 0,00000002x^3 + 0,00042032x^2 + 1,93003885x + 19\,640,84619561, \text{ with } R^2 = 0,64516553$$

The coefficient of determination less than 75% (in our model 65%), which can be attributed as low.

Similar calculations were made by the author for Brazil - figures 3.3 and 3.4.

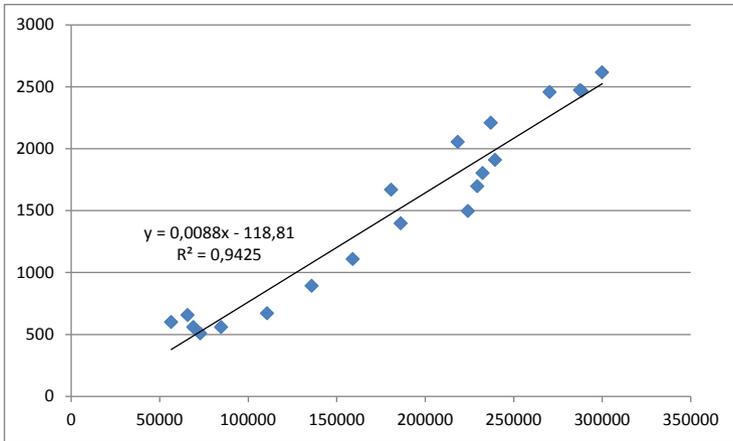


Figure 3.3. — Regression analysis of "Export-GDP" in Brazil (compiled by the author)

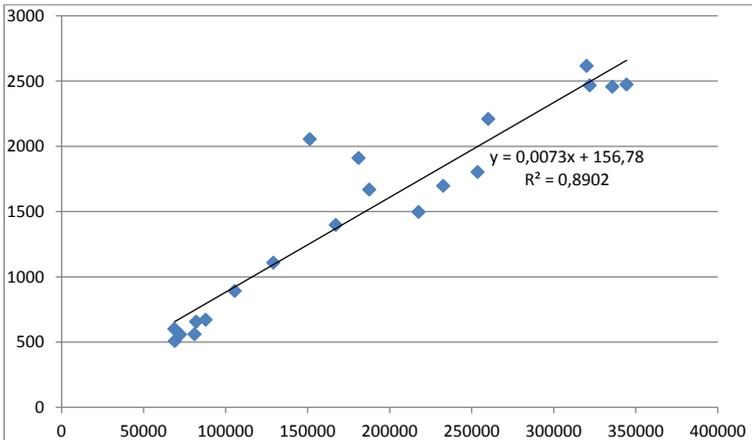


Figure 3.4. — Regression analysis of "Import-GDP" in Brazil (compiled by the author)

In general, the export-import model describes positively the interrelation of the activities of TNCs with the economy of Brazil. The resulting linear function allows you to quickly and easily assess the change in GDP with a specific change in external trade turnover.

With the change in exports, respectively, by 1%, GDP will increase by 2.9%. With a change in imports by 1%, GDP will increase by 3.2%. The coefficient of determination is 94% and 89%, respectively, makes it possible to predict the economic trends of the influence of “translations” with a high degree of confidence.

The model of interaction between FDI and GDP, as well as in Russia, will not be considered due to the low significance (71%) in the considered correlation.

$$y = 0,00000009x^2 - 0,01636952x + 658,72680543 \text{ , with } R^2 = 0,71431884$$

For a more in-depth and detailed analysis, we will consider two-factor models of the impact of globalization on GDP for Russia and Brazil (figures 3.5 and 3.6)

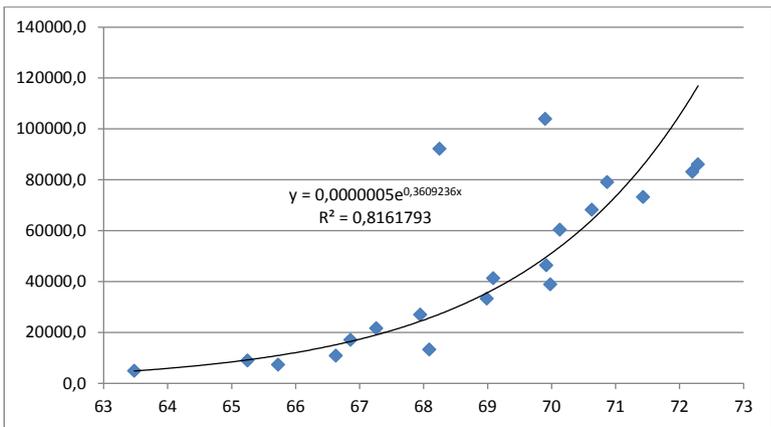


Figure 3.5. — Regression analysis of "Globalization-GDP" in Russian Federation (compiled by the author)

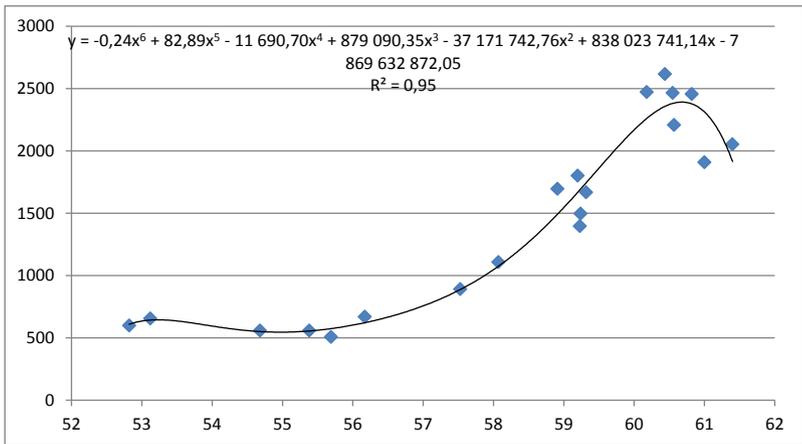


Figure 3.6. — The Regression analysis of "Globalization-GDP" in Brazil (compiled by the author)

The Exponential function was used for Russia and the Polynomial function for Brazil. The coefficient of determination of these models is 81% and 95% in Russia and Brazil, respectively.

According to the results of the analysis in Chapter 3 were built correlation and regression models, on the basis of which we can draw the following conclusions which have scientific novelty:

1. Revealed a steady relationship between the level of globalization and GDP, which creates conditions for further research on the nature of this relationship and the hidden influencing factors in our future scientific research;
2. A sufficiently positive relationship between exports and imports of the countries in question has been established, which has a positive effect on the level of GDP. This confirms the thesis highlighted at the very beginning that the activities of TNCs have a direct impact on the economies of the countries concerned.
3. The link between FDI and GDP was not established sufficiently strong, which is apparently caused by the restrictive measures of the state in terms of administrative, customs, tariff and tax regulation in Brazil and the Russian Federation.

Thus, we can conclude that all the objectives of our research have been achieved, first of all, we analyzed the impact of TNCs on the economies of Brazil and Russia, determined the strength and direction of this influence, the goals of the work can be considered achieved.

CONCLUSION

The following conclusions have been made upon conducting the research:

1. The role of TNCs in global value chains (GVCs) is significant. TNCs spend the available factors of production more effectively, forming ascending and descending connections from the creation to the sale of goods, forming part of its value added. The decisive role of TNCs in the processes of globalization that took place in the 20th century, which still exist today, was revealed.

2. The key approaches to the concept of "transnational corporation" (production, financial, legal) have been examined. For the purposes of this work, the classic UN definition of TNCs has been used. According to it, TNCs should operate in two or more countries, to implement the general policy and strategy of development of the group (e.g. holding), but also have an organizational and administrative, legal and financial-economic impact on downstream business units.

3. The concepts of "transnational corporation" and "corporation" have been differentiated. TNC is a corporation, but not every corporation is a TNC, hence, TNC is a narrower concept. If a corporation is localized in one country and carries out business activities in other countries (including has branches, representation, dependent subsidiary companies) in that case the corporation can be classified as transnational.

4. A schematic diagram of the TNCs development in the country in terms of a systematic approach has been developed. TNCs are an open system, influenced by many stakeholders, forming the institutional, organizational, economic basis of TNCs' activity in the country. At the same time, the development of TNCs determines the development of the surrounding meso- and macro-environment and depends on it, that is, this process is bidirectional.

5. The differences between the concepts of "transnational corporation" and "multinational corporation" have been drawn, namely, that TNCs do not have a centralized management system within a divisional structure (headquarters is responsible for the policy and overall strategy of the subsidiaries and affiliates group). TNCs are also not involved in subsidiary relations, but own assets around the world. TNCs are more focused on the socio-environmental and economic interests of local markets and the local community, they are more flexible in terms of linking goals and maintaining their interests (if necessary, it is possible to change the country of localization).

6. The synergistic effect of the TNCs' activities has been analyzed. As a result of combining assets and business units under a single management, firstly, the efficiency of work increases, and secondly, the value of the group of companies increases. The peculiarity of these processes is that the total efficiency and cost of business units is bigger than a simple arithmetic sum when considering the indicators of their work separately.

7. The key socio-economic and institutional performance indicators of developed, developing and transition economies have been considered. Differences in the standard of living, economy and business conditions in these countries are clearly revealed. It is shown by what criteria the UN, the International Monetary Fund and the World Bank classify countries into the above categories and that Russia and Brazil belong to the category of developing countries.

8. The dependence of TNCs development in an integrated life cycle approach, sustainability, and risk activities has been shown. It has been clearly demonstrated that, in fact, both countries and their TNCs are essentially economic "black boxes" which have raw materials at the entrance and finished products at the exit. Due to the fact, that the systems under consideration are fundamentally open, their mandatory element is the accounting of market signals to the input and output flows, as well as the construction of the inverse relationship circuit with subsequent corrective action. As a result, a revolutionary (abrupt) growth, that is, a sharp (instant) transition to a new level of development is fundamentally impossible without a critical accumulation of innovation and qualification level in each of the systems.

9. The analysis of the economic policy of Russia and Brazil has been carried out. It can be concluded that the serious impact of the global financial and economic crisis on the economies of the countries considered, GDP, foreign trade turnover, inflation, the unemployment rate increases the role of TNCs as engines of economic development in overcoming these crisis phenomena.

10. The key problems of the activities of Russian and Brazilian TNCs themselves have been identified. These are a high level of corruption and transparency, low level of investment in innovative development, insufficient influence on the international markets situation, loss in the TNCs competitiveness from leading developed countries.

11. Conducted correlation and regression analysis of the impact the performance indicators of TNCs: exports, imports, FDI and the index of globalization on the indicator of the economy of Brazil and Russia: GDP. Based on the results of the analysis, functional dependence models have been constructed:

- in Russia, there is a strong positive relationship between GDP and imports ($R^2 = 0.88$) and exports ($R^2 = 0.81$). The relationship between GDP and foreign direct investment balances can be described as weak and unsuitable for scenario planning;

- for Brazil, the dependence of GDP on exports ($R^2 = 0.94$) and imports ($R^2 = 0.89$) is even stronger than in Russia. At the same time, the average dependence of GDP on FDI is the opposite ($R^2 = 0.71$) – an increase in the FDI balance leads to a decrease in GDP;

- dependence of GDP index of globalization ($R^2 = 0.82$) and Brazil ($R^2 = 0,95$) strong positive. This aspect of activity requires further study in terms of the impact of hidden factors in this model.

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**TRANSNATIONAL CORPORATIONS IN THE ECONOMIES
OF DEVELOPING COUNTRIES AND COUNTRIES
WITH ECONOMIES IN TRANSITION
(for example, the federal republic of brazil and the russian federation)**

Monograph

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