Corporate rent and its role in replication of regional resource dependence

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Abstract. For countries with significant natural resources, the process of distributing and managing rents plays a key role. For a long time, the influence of rent on the development of territories was assessed by comparing the dynamics of the growth rates of the gross domestic product of countries with resources and countries without natural resources - a macroeconomic approach. The criticism of this approach is well known. Much less studied is the microeconomic aspect of this problem - how a company extracts rent and how the method of withdrawing and disposing of corporate rent (excess income received by an individual company) affects the development of its host regions. The so-called resource regions are experiencing the greatest negative impact. At the same time, it is the activities of large mining companies that lead to a stable replication of the resource capacity of the economy - the dependence of the country's well-being on income from the extraction and export of natural resources. The purpose of this article is to describe the mechanisms of extraction and distribution (corporate rent) at the level of mining companies and assess the impact of these processes on the host regions. PJSC Gazprom, PJSC Lukoil, OJSC UGMK, JSC SUEK were selected as examples. The choice of companies is due to their role in the relevant sectors of the fuel and energy complex, as well as the pronounced multidirectional influence of these companies on the regions. The methodological basis of the article is the concept of value chains. It is shown that the mechanisms for extracting and distributing corporate rent at the level of mining companies have a significant impact on the regions where they are based. The search for ways of optimal distribution and effective impact of natural rent on the development of resource regions through the formation of new value chains is proposed as a "treatment". Interaction scenarios can be different: interaction with scientific and educational institutions or the creation of scientific and educational centers. It is proposed to stop special attention on the formation of new manufacturer-controlled value chains based on cooperation with vertically integrated companies.

1. Introduction

The great size of the territory predetermines the particular richness of Russia in natural resources – 10 to 15% of the world’s reserves of mineral resources. Russia is the world leader in terms of reserves of natural gas, nickel, silver, apatite, and diamonds. The country is among the global top five in terms of coal, iron ore, uranium, lead, tungsten, titanium, platinum, gold, potassium salts, and phosphorites deposits. Russia, like many resource-rich countries, is highly dependent on their extraction and export sales. In 2017, aggregate natural resource rent in Russia, that is the sum of rental income from the use of limited natural resources, which includes the income from the operation of oil, gas and mining
fields, use of agricultural land, forests, waters, etc., amounted to 10.7% of GDP according to the World Bank data. Most of this rent was contributed by oil and gas – 6.43% of GDP, coal – 0.44% of GDP, and other non-energy resources – 3.83% of GDP. The most important role is played by oil and gas rent, for example, in 2018 the amount of oil and gas revenues (resource payments, excluding corporate taxes of oil and gas companies) amounted to more than 9 trillion rubles, which is 46.3% of all federal revenues [1,2].

![Figure 1. The proportion of natural resource rent in Russia’s GDP as a percentage of GDP (1988–2016) [1].](image)

It affects the development of countries with considerable natural resources in different ways. History knows both examples of the successful development of natural rent – the industrialization of the USA, Sweden, Australia, Brazil, and its ineffective use, the formation of the resource curse in Nigeria, Congo, Angola, Venezuela, etc. [3,4]. M. Levin and G. Satarov reasonably indicate that rent does not contain a built-in indicator of efficiency: in its essence it is only a potential opportunity for both successful economic development and for stagnation and even for the primitivization of production, the choice largely depends on who and how uses the natural rent. By its nature, natural resource rent is a surplus profit (surplus income) obtained from the use of limited, different-quality natural resources and appropriated by the owners of these resources [5].

There are many different classifications of rent. The types of rent can be distinguished by the sources (methods) of its origin: economic, differential, absolute, and monopoly rent [3]. The first type of rent is obtained through the introduction of innovations, the second one – due to the difference in prices for raw materials of different quality and convenient geographic location (proximity of consumers, low transportation costs), the third and fourth ones – due to a monopoly position in the market and special relations with the country’s government through direct ownership of assets (cf., Coal India), or through mechanisms for providing access to coal assets (licenses, concessions, etc.). The three latter types taken together form the natural resource rent.

For countries with significant natural resources, the process of distributing and managing rents plays a key role. It is these processes that ultimately determine whether natural wealth will lead to prosperity or curse – the replication of resource dependence and a decrease in the quality of economic development [6]. For a long time, the impact of rent on the development of territories was assessed by comparing the dynamics of GDP growth rates in countries possessing natural resources and countries possessing none – a macroeconomic approach. The criticism of this approach is well known [7].

Much less studied is the microeconomic aspect of this problem – how the company obtains rent and how the method of withdrawing and disposing of corporate rent (excess profits gained by an individual company) affects the development of its host regions [8]. The most negative impact is experienced by the so-called resource-based regions – regions whose GRP structure is dominated by the mining industries (more than 10% of GRP, according to the World Bank methodology). At the same time, it is the activities of large mining companies that lead to a stable replication of the resource...
orientation of the economy – the dependence of the country’s well-being on income from the production and export of natural resources.

The purpose of this article is to describe the mechanisms of obtaining and distributing corporate rent in the case of extracting companies and to assess the impact of these processes on the host regions [9]. PJSC Gazprom, PJSC Lukoil, OJSC UGMK, and JSC SUEK were selected as examples of such companies. The choice of companies is justified by their role in the respective sectors of the fuel and energy complex as well as the pronounced multidirectional influence of these companies on regions.

2. Data and methods
To analyze the previous studies of the impact that corporate rent of extractive companies exerts on resource-based regions, the following sources of information were used in the paper: data on world energy statistics of the International Energy Agency (IAE), BP, data of the Federal State Statistics Service of the Russian Federation, and the Ministry of Energy of the Russian Federation. To identify the peculiarities of the value chains of the largest mining companies in the fuel and energy complex, an analysis of the companies’ official documents (reports, development strategies), official websites and public speeches of top managers for the period 2017–2019 was conducted.

The methodological basis of this study is the concept of value chain proposed by R. Kaplinsky and M. Morris [10,11]. A certain similarity of the mechanisms for capturing and managing economic profit in value chains and corporate rent within large mining companies in the fuel and energy complex makes it possible to use the value chain analysis toolkit to study the impact of corporate rent of the largest Russian mining companies on their host regions [11]. Moreover, identification of key links in value chains enables the researcher to consider not only already existing directions of rent distribution but also potentially possible ones and the consequences of such choices. This approach also provides researchers with an opportunity to bypass the problem of the inaccessibility of objective quantitative data on the volume of corporate rent in individual companies.

3. Results and discussion

3.1. Corporate rent and value chains
The essence of the value chain concept is that the activities of companies in related industries are described in the form of a value chain, where the activities of a group of companies “are presented as a set of various activities aimed at the development, production, marketing, delivery and service of their products” [12]. VAC “is a stable mechanism for accrual of value in the process of creating the final product, which includes various technological stages of production as well as design and marketing of products”[13]. Value chains include research, design, distribution and after-sales service of the consumer [14]. This approach makes it possible to trace the stages of creating the final product and highlight those stages that most affect the process of creating added value due to excess profit – rent, or inversely, reduce it as a result of ineffective organization of production and marketing of products. The links that do not play a significant role in the obtaining and redistribution of rent are not identified (are not included in the value chain). Compared to the classical market or industry value chains analysis, it allows for a deeper study of various aspects of inter-business interaction, identification of opportunities and failures of firms and territories within the chains, defining barriers that impede the development of companies, showing the impact companies have on their host region, suggesting recommendations in the field of public policy to eliminate the weak elements of value chains and support the strong ones [15].

Each type of activity is a link in the value chain – an analytical unit that significantly affects the process of obtaining and retaining rent. The methods of retention of rent include the formation/change in the composition and structure of the value chain; creation, maintenance and modification of mechanisms of interaction among the key participants in the chain; formation and maintenance of rent distribution channels within the value chain [11].
There are two basic approaches within the value chain concept: macroeconomic and microeconomic. The aim of the former is to study the sources of regions’ competitiveness. Therefore, in modern literature, it is actively applied to study the processes of transnationalization of production in the modern global economy [16]. In this approach, the subject of analysis is the entire chain of transformations of raw materials into the final product – the global value chain (GVC). By fixing the current location of the key value chain links, the macroeconomic approach allows researchers to show the place of territories in the social division of labor, the positive and negative impact of individual value chain links and the entire chain on the competitiveness of the host regions. Thus, it provides tools for finding unobvious directions for diversification and future development of regions [16,17].

For the purposes of this study, the microeconomic approach is more suitable. It focuses on the sources and conditions for the creation and retention of excess income (rent) within one or several related companies [15]. Therefore, in the microeconomic sense, value chains are shorter, their boundaries do not always stretch from raw materials to the final product, but are entirely determined by the stability of supplies and the role of links in the obtaining and redistribution of corporate rent. Corporate rent here is a set of sources of excess profit as well as ways to keep them within a specific value chain. The corporate rent includes:

- economic rent, which is formed through innovation: the creation of new sources of raw materials, products and technologies; the formation of new markets; creation of new organizational structures, etc;
- monopoly rent, which originates in the production amount, barriers to market entry, including restricting access to limited natural and intellectual resources enabling a company to redistribute a part of normal income and economic rent of other entities in its favor;
- resource (natural) rent, which is based on the possession of unique assets and resources (including natural resources).

There is a definite relation between the type of rent prevailing in the structure of the company’s corporate rent, the type of value chain and the nature of the influence on its host region (see table 1 for more details).

**Table 1.** The relationship between the type of rent, the type of value chain and the nature of the company’s influence on its host regions.

| The dominant type of rent | Economic rent | Monopoly rent | Resource rent |
|--------------------------|--------------|--------------|---------------|
| The source of rent       | Resources and more productive technologies | Market monopoly, unique goods and markets | Monopoly on unique resources |
| Prevailing type of value chain | “Producer-led” | “customer-led” | additive |
| Core competency | Production and cost management | Sales and market management | Managing access to and demand for resources |
| The key rent-generating link in the value chain | Centres engaged in research and production high | Sales and financial centres medium | Financial centres |
| Incentives to reduce costs and improve production process | Unified technology and narrow specialization | Rent redistribution and restriction of access to the market | Rent redistribution and restriction of access to resources |
| What maintains the stability of the value chain | long, flexible, branched, stable | Long, unstable, possibly branched, but more often hierarchical | short, stable, inflexible, hierarchical, closed |
| The nature of the value chain | Towards the key link of the | Towards the financial / | Towards the financial |
| The direction of rent redistribution | | trade centre | centre |
Interest in increasing the competitiveness of the host region | High, positive influence prevails | Medium, both positive and negative impact can occur | Low, especially strong negative impact is manifested in the regions where natural resources are extracted

Thus, for sustainable production of economic rent, so-called “producer-led chains” are most suitable. In these chains, excess profits are formed through the amount and scale of production, innovation and technological breakthroughs. These value chains are characteristic of capital- and knowledge-intensive industries dominated by vertically integrated companies and production units play a key role in rent-seeking through the coordination of the production process (including connections with suppliers and consumers).

The resulting excess income is created through the use of more advanced production and organizational technologies, investments in production, research, human and social capital. The dynamics of economic rent is an objective indicator of efficiency and an internal incentive for the development of companies. Producer-led value chains are stable, long enough, branched, and include in their structure a whole chain of various specialized and non-specialized suppliers. Thanks to this, companies with a producer-led value chains have a significant positive impact on their host regions as they increase the investment multiplier by means of production localizations and diversification the region’s economy. They create extra jobs (including highly productive ones). Companies with such value chains actively invest in the material and social infrastructure of their host regions, since these are the essential conditions for obtaining economic rent. All this contributes to the growth of small and medium-sized businesses, supports competition and eventually increases the competitiveness of the host regions [18,19].

Alternatively, the predominance of monopoly and resource rent in the structure of a company’s corporate rent leads to a reduction in non-core industries in the host regions, restrains competition and results in monopolization of regional markets and lower employment rate. As a rule, a single-industry structure of the economy is formed in the host regions, based on low and medium technologies with a long reproduction cycle and a low investment multiplier. At the same time, “customer value chains” or additive chains are formed, in which the major rent flows are redistributed from resource extraction centres and production centres in favour of trade and financial centres. In customer-led value chains, brand owners – large retail and marketing companies – play a key role. Customer-led value chains are common in labour-intensive process industries producing consumer goods, where the production is usually performed by a multi-tiered network of contractors. This leads to the fragmentation of the production process into a mass of sub-processes that can be organized in parallel and, therefore, there is no internal need for their localization (locating within one region). The source of surplus income is relatively low resource prices, as well as reduced production and transaction costs. Companies with customer-led chains tend to be less high-tech oriented and have less incentive to develop internally. The positive impact on the host territory is limited to solving the problems of accelerated industrialization.

Finally, there is a third type of chains – additive value chains. These are vertically specialized chains that are formed as a result of fragmentation of activities, narrow specialization of individual stages. The source of excess profit in such value chains is monopoly on exclusive resources, a convenient geographical location, and the company’s concentration on key operations related to the extraction and transportation of resources [14]. Additive value chains rely on resource rent, so there is little interest in the introduction of modern technologies. They rarely include research and development centres as separate important links. Such chains are of a closed nature, their positive impact on increasing competitiveness of the host regions is limited. This type of chain tend to dominate in the fuel and energy complex and extractive industries.

3.2. Features of value chains in the extractive industries
The classical value chain model is a description of the key links of value creation in the manufacturing industry [20], this is explained by the fact that the value chain concept has so far rarely been used to study extractive industries [21,22]. However, even a quick glance reveals its features. Firstly, in most cases it is additive in nature, which is especially evident in companies focusing on the export of resources. Secondly, the value chain in the extractive industries is much shorter and has only two stages: production and post-production. Longer and more branched chains are formed when mining companies are part of industrial energy or metallurgical holdings. In such cases, value chains are similar in nature to customer-led chains. This feature of the extractive industries can be explained by the high proportions of natural resource rent in the structure of corporate rent of companies.

Value chain of many mining companies contain virtually no research and development stage. So, even in the leading coal-mining countries with developed market economies (Australia, Great Britain, the USA, and Germany), the patent fund is small and it falls mainly on machine-building companies engaged in the production of coal mining and transport equipment located outside the coal value chains [21]. The same situation is observed in the oil and gas industry. Very often, fuel and energy companies acquire a patent not for the purpose of introducing it, but for preventing competitors from using this technology.

It is not uncommon that the patent holder is an offshore company. All these examples clearly show the significant role of monopoly rent in the structure of corporate rent of extracting companies and the subordinate role of economic rent. This can explain the fact that the localization of engineering companies, companies that perform technological transfer of innovations to the extractive industries and research and educational institutions that train personnel for these industries are rarely localized in the places of the main production.

The production stage in the value chain for mining companies includes the stages of exploration, design and construction of the facilities, as well as the actual production and primary processing. Due to the additivity of the value chain, most of the added value in such companies is created in the production units engaged in mining and primary processing, and the main source is not economic rent (innovative and entrepreneurial profit based on the introduction of new technologies), but absolute and monopoly rent. The marketing expenses of the extracting companies are less significant compared to the manufacturing industries. Despite the fact that in modern conditions the number of alternative technologies for the processing of energy resources is growing, the end consumer in the coal industry and the gas industry is represented mainly by energy and metallurgical and oil companies, and that in the oil industry – by oil refineries [21]. It is these features of the value chain in the fuel and energy complex that explain the high degree of autarchy in the mining sector and the low level of the investment multiplier in resource-based regions [23].

The global market plays an important role in the formation of the value chains in the extractive industries. Most of the countries exporting energy resources, including Russia, are included in it on the basis of upward links – the export of raw materials with low added value in exchange for the import of finished products with high added value. All of these conditions lead the extractive industries to inflexible value chains led by large, vertically integrated companies that are hierarchical or captive in their structure. In the first case, mining companies enter the value chain of metallurgical or energy holdings as a resource asset. This value chain is most common in the mining industries. Examples of such captive structures are BHP Billiton (Australia), Rio Tinto (USA), Glencore International (Switzerland), Norilsk Nickel, Evraz Holding, and Mechel (Russia). Hierarchical structures in the production–export logic prevail in most oil and gas companies, very often they are wholly owned or controlled by the state. Coal India (India) and Coal China (China) are examples of such structures among coal mining companies [24].

The value chain structure of extracting companies and the relative location of centres for creating and managing rent have a serious impact on the host regions. The positive effects include growth in industrial production and GRP, growth in personal incomes, increased financial security of regional budgets, development of industrial and social infrastructure. The negative ones are the formation of a single-industry structure of the region, a high dependence on prices for resources in the global
markets, a significant environmental load, etc. Direct channels of influence are investment and social programmes of companies implemented in host regions, tax payments to regional and local budgets originated from the divisions of companies located in the region and employees working in them. They create a resource multiplier. However, as a general rule, if mining companies confine themselves to investments in production, the resource multiplier is very weak, and the region’s development follows the Latin American model of replication of resource dependence (weak development of manufacturing industries, increased resource dependence, growth of regions’ autarky, and strong dependence on foreign volatile resource markets). If companies are actively involved in the localization of industries adjacent to the fuel and energy complex in the region, innovative, engineering companies, especially in top-down ties, for example, the development of oil and gas or coal mining machine building, it is possible to expect the Norwegian model of resource industrialization with a high resource multiplier, reduced resource dependence and relatively stable diversified development of the region and relatively highly qualified personnel.

Indirect channels of influence on resource-based regions are the mechanisms for redistributing corporate rent within the company between the main links of the value chain using transfer prices, formal and informal agreements of regional branches of companies with authorities and development institutions. At the same time, most of the positive effects tend to be observed in those regions where the higher stages of the fuel and energy complex value chains (processing and transportation) are localized, negative effects correlate with in the lower links of the chain – geological exploration and production [25].

3.3. Value chains of the largest mining companies in Russia
At present, in Russia, a significant part of the industrial assets of the fuel and energy complex is integrated into large structures, which are characterized by an extensive spatial organization and dominance in certain spheres of activity and regions. Extraction of minerals is concentrated in the hands of large vertically integrated companies (VICs) having special relations with the government, which allows them to form a kind of closed enclaves around companies, to obtain and redistribute corporate rent consisting mainly of natural and monopoly rent. V.I. Nefedkin notes that the influence of such structures in the Russian economy is growing, and vertical (hierarchical) coordination increasingly displaces horizontal, based on the interaction of equal market actors [26].

|                          | Total number of companies | Number of VICs/companies included in them | Share of production attributable to VICs |
|--------------------------|--------------------------|------------------------------------------|----------------------------------------|
| Production of oil and gas condensed | 292                      | 11/205                                   | 85%\(^{a}\)                             |
| Production of natural and associated petroleum gas | 259                      | 10/82                                    | 78%\(^{a}\) (66%)\(^{b}\)            |
| Coal mining              | 187 (57 mines and 130 open pits) | 13/54                                   | 54%\(^{c}\)                            |

\(^{a}\)The share of the five largest VICs (PJSC Oil Company Rosneft, PJSC LUKOIL, OJSC Surgutneftegaz, PJSC Gazprom Neft and PJSC Tatneft)
\(^{b}\)The share of PJSC Gazprom
\(^{c}\)The share of production attributable to JSC SUEK, JSC Holding Company SDS Ugol, OJSC UMMC, PJSC Mechel and Evraz Group SA

As of 01.01.2020, the 24 largest VICs in the fuel and energy complex accounted for 87% of total oil production, over 78% of gas production and 79% of coal production. More than 259 production enterprises produce natural gas in Russia including 82 companies that are part of vertically integrated oil holdings; 15 subsidiaries of Gazprom; nine structural divisions of NOVATEK; 150 independent oil
and gas companies; and three enterprises operating under production sharing agreements (PSA operators). The largest of them is PJSC Gazprom, it is this company that largely determines the method of obtaining and the mechanisms for redistribution of the entire natural resource rent in the country. The significant ones also include PJSC Gazprom Neft, PJSC Oil Company Rosneft, PJSC NOVATEK and PJSC LUKOIL. In 2019, in terms of regional structure, about 83.6% of natural gas was produced in the Ural Federal District, primarily, in the Yamalo-Nenets Autonomous District (over 88%). The rest of the gas production is made in the European part of Russia, Eastern Siberia and the Far East [28].

Two thirds of Russian oil production is made by five vertically integrated companies – PJSC Oil Company Rosneft, PJSC LUKOIL, OJSC Surgutneftegaz, PJSC Gazprom Neft and PJSC Tatneft. Excluding joint ventures, they have extracted 85% of the country’s oil. The remaining 15% was provided by independent large, medium and small companies, as well as joint oil and gas companies.

There are 187 enterprises operating in the Russian coal industry (57 mines and 130 open-pit mines), but more than half of domestic production is provided by only five companies, among which two specialize exclusively in coal mining: JSC Siberian Coal Energy Company (JSC SUEK) and JSC Holding Company SDS Ugol, as well as three metallurgical holdings – OJSC UMMC, PJSC Mechel and Evraz Group SA, in which coal assets form the lower part of the value chains. All the largest oil, gas and coal companies are included in the list of systemically important companies, in 2020 this list consisted of 97 companies. Admission to this list allows companies to apply for government support in the form of subsidies, budget funding and cheap loans. Of course, these privileges are not given automatically, but they provide the possibility of obtaining monopoly rent in times of crisis.

In order to assess the impact of large VICs of fuel and energy complex on resource-based regions, the authors attempted to correlate the development of resource-based regions and production assets of 4 large VICs based on their territory: two oil and gas producers – PJSC Gazprom, PJSC LUKOIL, and two companies with significant coal mining assets – JSC SUEK (industrial energy holding) and OJSC UMMC (metallurgical holding). Table 3 shows that the majority of large Russian mining companies have relatively short VACs, which are either producer-led (small companies, or large companies with a significant share of domestic sales) or are additive in nature. The latter is typical for companies oriented to the external market – PJSC Gazprom and JSC SUEK.

**Table 3.** Comparative analysis of the value chains of the largest Russian mining companies.

| The type of company | The main extracted energy resource | Share of the company in the global market | Share of the company in Russia | Share of supplies in the domestic market | Share of export supplies | Value chain type | The place of registered management logistics centre | Main regions of production |
|---------------------|-----------------------------------|-----------------------------------------|------------------------------|----------------------------------------|-------------------------|----------------|-----------------------------------------------|-----------------------------|
| PJSC Gazprom        | gas                               | 12%                                     | 68%                          | 51%                                    | 49%                     | additive       | Moscow / St. Petersburg                       | Yamalo-Nenets Okrug, Yugra, Nenets Okrug, Krasnoyarsk Territory Yugra, Nenets Okrug, Tyumen Region, Krasnoyarsk Territory Kemerovo |
| PJSC LUKOIL         | oil                               | 2%                                      | 15%                          | 26%                                    | 74%                     | producer-led   | Moscow                                       |                              |
| JSC                 | coal                              | 5%                                      | 24%                          | 40%                                    | 60%                     | additive       | Moscow                                       |                              |
SUEK energy holding

OJSC metallurgic coal 2% 11% 54% 46% producer

UMMC al holding Verkhnyaya

Krasnoyarsk Region, Kemerovo

Territory Tyumen Region, Orenburg Region,

Tomsk Region

Figure 2. Value chains of the largest Russian VICs in the fuel and energy complex [29-32].
The length of the chains and the degree of branching of companies also differ. The main differences are related to which market – external or internal the company operates in. Figure 2 shows that the companies operating mainly in the external market, PJSC Gazprom and JSC SUEK, have shorter and unbranched value chains, on the contrary, in PJSC LUKOIL, value chains are more complex and branched.

Evaluating the influence of these companies on the regions where the main production assets of the companies are located, the following can be noted. All regions belong to the groups with high resource dependence and middle resource dependence. The former are characterized by the dominance of the extraction of raw materials in the structure of regional GRP (over 30%) including Nenets Autonomous Okrug (> 70%), Khanty-Mansi Autonomous Okrug (> 60%), Yamalo-Nenets Autonomous Okrug, and Tyumen Region (> 40%). The oil and gas sector dominates in the structure of mineral extraction industry. These regions are characterized by such features as low population density, low unemployment and an acute shortage of labour resources, a high level of income, and an uneven (focal) level of regional development. In addition, these regions are characterized by a significant lag in the development of material and social infrastructure. The resource dependence of these regions has been growing over the past 15 years, and the prevalence of resource rent and additive value chains in the structure of corporate rent of these companies is unlikely to change the situation for the better in the near future. Regions of middle resource dependence also have a significantly developed production sector in the structure of the regional product (20–30% in the GRP structure) and there is a significant influence of single-resource mining industries of large VICS. Resource dependence increases in regions where VICS have an additive structure and is stable if value chains are of producer-led type. These regions are characterized by a relatively developed infrastructure. Large VICS also have a significant impact on the development of these regions, but this influence is gradually decreasing. The common feature of these regions is the growing role of restrictions on further extensive development based on mining and export of fuel resources.

4. Conclusions
All of the above allows the authors to conclude that the mechanisms for obtaining and distributing corporate rent in the case of mining companies have a significant impact on the regions where they are based. So far this impact has been predominantly negative, this is largely caused by the high share of the resource component in the corporate rent of mining companies. At the same time, the value chains typical for these companies contribute to entrenching these negative trends. The search for ways of optimal distribution and effective impact of natural resource rent on the development of resource-based regions through the formation of new value chains is an extremely urgent task. Its solution is not possible by VICS alone, without the active involvement of the legislative and executive authorities of the regions in question. For the most part, this is due to the need for interaction on the introduction of new technologies and for the formation of the (primarily) domestic market for product consumption as a result of launching a new value chain.

Interaction scenarios can be different. By interacting with research and educational institutions, the authorities can become right holders regarding promising technologies, on the basis of which they can create conditions for the growth of economic rent and the creation of new alternative value chains in cooperation with business structures and investors through the creation of business corporations. Another promising form of interaction in the formation of new value chains is the world-class Research and Educational Centres (RECs) created in the regions with the support of the Russian Government. Finally, the optimal distribution and effective impact of natural resource rent on the development of resource-type regions can be achieved through the formation of new producer-led value chains based on the cooperation of VICS.

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