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NEW INSTITUTIONAL ECONOMICS AND THE DEVELOPMENT OF RAILWAY TRANSPORT INFRASTRUCTURE

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Purpose: The aim of this article was to show the significant influence of various types of institutions on the development of railway transport infrastructure.
Design/mathodology/approach: The main research method used was the analysis of specialist literature, both domestic and foreign.
Findings: It was presented how important an influence institutions have on the development of railway transport infrastructure. It was shown that looking at issues related to the development of transport infrastructure through the prism of the new institutional economy provides a broader and more complete picture of this issue.
Orginality/value: The article presents a different perspective on issues related to the development of rail transport infrastructure. It also provides an impetus for further research and analysis of the impact of various types of institutions on the development of rail transport infrastructure.
Keywords: New Institutional Economics, transport infrastructure, institutions, railways, state.
Cathegory of the paper: Literature review, General review.

1. Introduction

Recently, new institutional economics has been gaining popularity. Through its broad perspective on various socio-economic phenomena, it tries to explain their course. This article attempts to answer the questions of how and to what extent different forms of institutions influence the development of rail transport infrastructure. This is important because a well-developed and functioning rail transport infrastructure translates into the proper functioning of the economy and the state. The text shows that not only the basic factors of economic growth and development determine the development of rail transport infrastructure, but also a number of formal and informal institutions influence this process.

2. New Institutional Economics – historical outline

The New Institutional Economics (NIE), whose origins date back to the turn of the 19th and 20th centuries, introduced a new way of perceiving economic and social reality. The focus of its interests was on man and broadly understood institutions (Derkacz, Shahab, 2020). The roots of the New Institutional Economics can be found in Institutional Economics, the father of which was the American economist and sociologist of Norwegian origin, Thorstein Veblen. His most famous work is "The Theory of the Leisure Class" published in 1899, the fundamental work of institutionalism. Walton H. Hamilton, an American professor of law, also dealt with the issue of institutional economics. In his 1919 article "The institutional approach to economic theory", he emphasized that the decisions made by participants in economic life are influenced by various types of institutions. He also pointed out that the processes taking place in the economy are a derivative of many different factors and in order to understand a given economic phenomenon it is necessary to look at it in a broader perspective (Hamilton, 1919). The issues of the new institutional economy are the subject of interest of many scholars. These include: Douglass C. North, Ronald Coase, Steve Pejojovich, Oliwier E. Williamson (Sobiech, Woźniak, 2005). Also in Poland, the ideas of institutionalism are the subject of research by many scientists (Musiał, 2011).

As for the concept of institution, it has not been precisely defined so far. According to T. Veblen, institutions are treated as established patterns of behaviour and relationships that are accepted by society in a given place and time. In his work "The Theory of the Leisure Class" he wrote that: "social institutions are essentially dominant ways of thinking that take into account individual social conditions, individual functions of the individual and the community. [...] Social institutions - that is, habits of thought or ways of understanding phenomena - that guide human life, come from the past. They are products of the past, adapted to the conditions of the time, which is why they are never in complete agreement with the requirements of the present" (Veblen, 1971, p. 171).

John R. Commons was a student of Veblen and a continuator of his economic thought. His contribution to the further development of institutional economics consisted in introducing another definition of an institution and in emphasizing the great role of collective arrangements that operate in society and their impact on economic processes. He indicated such economic arrangements as the family, trade unions, associations, corporations or the state. Commons in his 1934 work Institutional Economics wrote that institutions can be defined "as collective action for the purpose of checking individual action" (Commons, 1934, p. 72).

Douglass C. North also made a significant contribution to NIE. In his publications, he wrote about institutions as the rules of the game within which individual social units and entire societies function in the economic system (North, 1990). Thus, according to him, institutions are rules, principles that shape social, economic and political interactions. These rules consist of informal rules, such as customs, traditions or rules of conduct, as well as formal ones, i.e. legal regulations, constitutions or property rights (North, 1991). D.C. North also defined organizations. According to him, organizations are players in the socio-economic game. Thus, a distinction is visible here between organizations (players) and institutions (rules of the game) (North, 2008).

Joseph E. Stiglitz, an American economist and winner of the Nobel Memorial Prize in Economic Sciences, extended the concept of institution to include organizations (those understood in the classical sense, not as players according to the NIE concept) (Stiglitz, 2000). It is worth noting here that D.C. North distinguishes the concepts of organization and institution, while O. E. Williamson includes organizations among institutions, just as J.E. Stiglitz does (Kuder, 2011).

The definition of an institution will probably never be established in a permanent way. This is due to the fact that over the centuries, this concept has evolved and attempts have been made to adapt to the changing socio-economic reality. In this context, we can talk about certain changes in institutions, about the process of institutional changes in the reality surrounding us (Derkacz, 2018). Similarly to the definition of an institution, in the case of the division of institutions one can come across various classifications of them in the literature on the subject. One of the most well-known divisions of institutions, which can be considered classic, is the one made by D.C. North. He divides institutions into formal and informal. According to him, informal stimuli create various customs, traditions or ways of acting. Formal stimuli, on the other hand, are already established law, constitutions, property rights and ways of enforcing them (Commons, 1934).

The development of the new institutional economics has brought a significant change in explaining quantitative and qualitative issues in the economy. According to the assumptions of the NIE, institutions play a key role in economic development, including the development of transport. The answer to the deficiencies and shortcomings of the neoclassical economy is the NIE, which adds institutions to the set of existing growth factors (labor, capital and technology). Researchers dealing with the NIE are trying to combine the previous achievements of the neoclassical economy with the new institutional economics. It is worth noting here that economists representing the NIE do not want to negate the achievements of classical economics, but only to improve it and its research elements with additional assumptions that have been omitted so far (Legiedź, 2013). It is the institution that is one of such tools that allow for the study of economic processes in a way that is much closer to economic reality. The concept of an institution itself is not fully unified. However, the most frequently cited definition is that of D.C. North, i.e. the “rules of the game” in the socio-economic environment (North, 1984).

One of the basic goals of institutions is to create mechanisms for the functioning of participants in social interactions and economic transactions. Firstly, economic entities in uncertain and risky situations refer to institutions as bodies that can significantly reduce this risk and uncertainty. Secondly, organizations constitute a certain framework for management, certain restrictions according to which one should function in the economic environment. Institutions select entities authorized to make specific decisions in designated areas, define permitted or prohibited actions, establish procedures that must be followed. In addition, institutions determine which information is to be presented and which requires confidentiality (Ostrom, 1990).

New institutional economics enriched with the previous achievements of neoclassical economics provides the possibility of a new, different analysis of economic processes using institutional elements. Using these institutions, economists representing NIE try to find answers to emerging economic phenomena. For this purpose, in addition to the standard factors of economic development (work, capital, technology), factors such as culture, history, customs, norms of behaviour, location and other factors previously omitted in this type of economic analyses are taken into account (Godłów-Legiedź, 2003).

It should be emphasized that D.C. North does not consider economic theory and economic history as disciplines and research issues functioning in a completely separate way. He is an advocate of using the tools of institutional economics theory to explain the historical evolution of various types of cultures. He assumes that in order to better understand the ongoing processes and historical changes, it is necessary to study them in a broader perspective. Therefore, issues related to, among others, economic theory should be taken into account. It should be noted that previously, economic history was a field of science devoid of specific theoretical foundations. On the other hand, neoclassical economics, due to its narrow view of economic processes, was insufficient to explain the changes and processes occurring in socio-economic systems over the centuries. Therefore, the new institutional economics provides new possibilities for explaining the complex economic processes taking place in the present world, but also those occurring in the past (Kwaśniewski, 2013).

3. Homo oeconomicus in the NIE

A person functioning in an environment of various interpersonal relations, when making various decisions, takes into account not only purely economic aspects, but also those of a moral, legal or social nature. He is also to some extent limited by informal institutions, which narrow his range of possibilities. Here, we can indicate a moral backbone or conscience created in the process of socialization and upbringing. In addition to informal institutions, people also create formal institutions that affect the socio-economic system, including issues related to transport. All this means that institutions should be taken into account when conducting research and analysis of economic processes. Unfortunately, in neoclassical economics, institutions were omitted and not taken into account by its representatives (Kasper, Streit, Boettke, 2012). Moreover, representatives of mainstream economics treated economic behaviours as universal, regardless of the place and time of their occurrence (Neale, 1988).

Neoclassicals did not take into account institutions and their influence on the development of economic processes and the level of economic development achieved by society (Godłów-Legiedź, 2003). Additionally, economists of this trend believed that institutions did not influence the decision-making of economic entities. As a result, their analyses did not take into account the actual social, cultural, historical or psychological conditions on the actions of individual participants in economic life. NIE negates the concept of rational man, homo oeconomicus, and at the same time is a supporter of the theory of limited rationality in the functioning of economic entities. This concept assumes that when making decisions, economic entities must take into account the costs of information obtained or limited cognitive capabilities. H.A. Simon is considered to be the forerunner of this approach (Godłów-Legiedź, 2009). He definitely negates the concept of economic man (rational man) who has complete (or if not complete, then at least extensive) knowledge about all important issues of the surrounding socio-economic environment.

In addition, he undermines the ability to make the best possible decision while maximizing utility. According to him, a person does not have the opportunity to obtain all the information and make the best decision based on it (Simon, Behavioral, 1955). One of the criticisms that Simon directs towards neoclassical economics is the weakness of its methodology, or more precisely, the failure to take into account the influence of the external environment on the person making the choice. According to him, the assumptions that are taken into account during the analysis of the decision-making process should be made more realistic. In addition, he believes that during decision-making, a person is limited by the systems of values they profess, the knowledge they have, or the scope of information they have managed to obtain from the environment. Additionally, habits, skills, or unconscious customs also act as limiters (Simon, 1976). Of course, based on the above information, it cannot be said that a person does not try to be rational at the decision-making stage. They try, but their rationality is significantly limited. It is intentional rationality (Williamson, 1998).

From the point of view of economists representing NIE, rejecting the assumption of the rationality of a business person is tantamount to rejecting the concept of homo oeconomicus in which a business person is characterized by full pragmatism. Homo oeconomicus is a being who, according to the assumptions of neoclassical economics, is fully rational, has unlimited cognitive abilities allowing for the selection of the best decision, and in his choices achieves maximum utility while minimizing costs (Wilkin, 2016). This is a person devoid of attachment to a specific culture or community, able to adapt to any economy and any circumstances (Iwanek, Wilkin, 1997).

Another reason why economists of the new institutional economy reject the concept of homo oeconomicus is the issue of honesty and loyalty to economic partners. According to NIE representatives, a person strives to achieve their own goals and desires, often doing so in a way that is inconsistent with the prevailing principles of law and ethical norms. The issue of dishonesty towards the contractor is caused by opportunism. According to them, opportunists consciously and intentionally mislead the other party to the exchange. An example of this is providing only partial information, distorting it, or hiding it in order to improve one's own negotiation and trade position (Williamson, 1998). It can be said that opportunistic behaviour is conduct that is inconsistent with generally accepted and acceptable principles, norms or rules, and therefore contrasts with existing institutions.

4. Economic development in NIE

According to the concept of neoclassical economics, economic development, an inseparable element of which is the development of infrastructure, takes place in an uninterrupted, stable way, and devoid of any kind of "friction". Any kind of disruptions that temporarily appear in the economic system are automatically leveled out by the system of demand and supply. In this way, the economy returns to the level of equilibrium. The effectiveness of such a system cannot be disrupted by other external factors occurring in the socio-economic system in which it functions (North, 1994). This type of economic narrative is questioned by representatives of the NIE. According to them, in the economic system we are dealing with a lack of equilibrium, a lack of automatic economic stabilization and the occurrence of "frictions". According to the NIE, the economic system also includes skills, knowledge, physical objects, as well as interpersonal relations, which are shaped and sanctioned by institutions (Ząbkowicz, 2003). For this reason, the proper allocation of resources in the economic system is supported by various types of laws, norms, rules or values professed by society (Pietrucha, 2008). In their opinion, institutions play an important role in creating the efficiency of the economic system. Institutions determine the scope of the functioning of the economic system, and their proper analysis allows for a better understanding of the complex processes and connections occurring in the socio-economic reality.

Depending on the theory, whether neoclassical economics or new institutional economics, through which we look at the processes taking place in the economy, then such and not other assumptions are taken into account in order to explain these economic processes. The definition of economic growth can be presented as a process of quantitative changes in macroeconomic values in a given economy. This growth brings about an increase in the volume of general production on a scale of the entire economy as a result of increasing its economic potential (Kwiatkowski, 2015). According to neoclassical economics, the factors of economic growth include: work, capital and technology. Unfortunately, limiting ourselves to basically only three factors influencing economic growth and development and using simple mathematical models does not allow for a full explanation of economic processes, as well as why this rate changes in time and space (Gruszewska, 2013). In addition, other shortcomings characterizing neoclassical economics include, among others, the lack of explanation of the reasons for the huge disproportions between different countries of the world, along with delays occurring in some economies. Another imperfection of this economic theory is the inability to explain revolutionary changes occurring in individual economies and the consequences of these phenomena. It is also worth mentioning the imprecise impact of innovation and the rate of capital accumulation in the assumptions of neoclassical economics (Miłaszewicz, 2011). The inability to explain economic phenomena, the level of development of a given country or possible economic inequalities using exogenous and endogenous models has led to the need to search for new ways of studying these phenomena. The so-called fundamental growth factors have become of interest. These include: the degree of openness of the economy, geographical location and institutions. The results of the conducted research have shown that among these three factors, institutions are the most important. The remaining two indirectly affect national income (Rodrik, Subramanian, Trebbi, 2004).

New institutional economics sees institutional factors as crucial in the processes of economic growth and development. Institutions affect not only quantitative indicators illustrating economic development, but also qualitative ones. NIE representatives believe that the institutional system translates into the level of development of a given country. For this reason, the analysis of these institutions is important (Legiedź, 2013). Research on qualitative changes in the economy within NIE can be divided into two groups. The first group is the so-called institutional macroeconomics. It concerns the holistic role of institutions in the broadly understood process of economic development and focuses on the study of the institutional environment. The second group is the one referring to institutional microanalysis. It involves the study of the institutional arrangement or management structures. Institutional microanalysis is used to study specific problems occurring in underdeveloped countries. Macroanalysis is used in research by, among others, D.C. North. The level of microanalysis is used by, for example, O.E. Williamson. According to NIE, institutions are a key point in the theory of economic development. They influence the use of traditional growth factors and also translate into the level of transaction costs in the entire economy. Additionally, properly functioning institutions influence the accumulation of both physical and human capital. They also encourage the implementation of technical progress and the development of knowledge. Properly functioning institutions motivate to conduct business activity, introduce innovations or invest (Staniek, 2009).

Within the new institutional economy, formal and informal institutions are distinguished. The types of these institutions differ significantly from each other, but both significantly influence the formation of the institutional system (Gruszewska, 2017). Both of them model economic, political and social interactions. Moreover, these institutions influence and interact with each other, which in consequence results in constant changes in the institutional system (Kuder, 2011). Formal institutions are characterized by the fact that they can be changed in a relatively short time. Moreover, unlike informal institutions, formal institutions can be changed intentionally. Changes in the system of formal institutions translate into changes in the functioning of the socio-economic environment. An example of this is the legal regulations created by the state authorities appointed for this purpose. However, in order for the newly created formal institutions to be fully and to an appropriate extent implemented into the socio-economic system, changes in informal institutions are necessary (Bentkowska, 2020).

Formal institutions have a major impact on limiting or accelerating economic development and growth. Their role comes down to creating clear and enforceable legal regulations. An important element is defining property rights and ensuring their effective protection. Contracts and the possibility of their easy implementation are also important within formal institutions. Appropriate institutions should facilitate their conclusion and execution. These bodies, by introducing specific regulations, are able to limit the costs of concluding contracts as a result of limiting information asymmetry. Easier and cheaper access to information is possible when market participants (e.g. companies) are required to report on specific indicators or activities (Williamson, 1998).

Informal institutions also have a significant impact on the economy. In this case, we should point to cultural patterns, willingness to learn and to improve qualifications, willingness to take risks, entrepreneurship, sense of social bond, religious norms, tendency to corruption or level of trust. However, the possibility of assessing the exact impact of informal institutions is more difficult than in the case of assessing formal institutions. Selected indicators of the quality of institutions in empirical studies include: the economic freedom index, the civil freedom index or the corruption perception index.

Informal institutions change in the long term, and in addition, their change occurs unintentionally. It should be emphasized, however, that informal institutions have a very large impact on the formation of formal institutions. In the case when changes in informal institutions, for some reasons, occur slowly and reluctantly, then changes in formal institutions are somehow inhibited by them. An example can be a situation in which a society is characterized by a high level of corruption and at the same time is not willing to stop this type of activity. In such a situation, a change in the law, i.e. formal institutions, concerning the introduction of penalties for dishonest activity will not be fully observed. Without changes in the approach of society to the issue of corruption, legal regulations will remain "dead" legal regulations (Woźniak, 2009). Another important element that also promotes economic development and growth is market competition. Formal institutions can influence the development of healthy market competition by creating appropriate law. These include, among others, antitrust law or licensing of specific sectors of the economy (Staniek, 2017). Other important formal institutions include those that ensure market stability (e.g. the central bank or legal acts regulating the macroeconomic policy of the state) or enable the resolution of conflicts and disputes (the judiciary).

The quality of formal and informal institutions and their level of development depend on external factors, as well as geographical, historical, political and cultural conditions. The participants of economic life in a given country (society and government) also have a great impact on the development and functioning of institutions. Formal and informal institutions interact with each other. This interaction can be weakening or stimulating. These institutions can complement or limit each other. However, only their mutual complementation leads to economic development and growth (Gruszewska, 2013). The institutional system is subject to constant changes, not only due to the mutual interaction between formal and informal institutions, but also as a result of the changing environment in which it operates. An unstable environment entails the need to introduce new changes in the institutional system. However, the changes that occur in the institutional system usually do not take place in a revolutionary way, but as a result of slow evolution. This is because in order to change the institutional system, it is not enough to change only formal institutions, but also a change in the system of informal institutions is necessary (Bentkowska, 2020). It should also be emphasized that modifying formal institutions does not always lead to the expected final effect. It happens that the final result is the opposite of the original intentions. This is because it is difficult to modify informal institutions. Moreover, the change of the institutional system does not take place in a vacuum, but in a specific political system, which also affects the process of changing the institutional system (Kwaśniewski, 2013).

Due to the fact that changes in informal institutions take place slower than in formal institutions, the entire process of converting the institutional system takes time. Of course, changes in informal institutions can be accelerated through various types of stimulation or creating specific patterns of behaviour. However, despite taking such actions, these transformations will take place slower than changes in the system of formal institutions (Bentkowska, 2020).

It should also be noted that despite achieving the desired change in the system of formal and informal institutions, it may turn out that the institutional system is ineffective. This inefficiency may result from improper enforcement of new norms that have been formed. For this reason, it is necessary to have appropriate systems for effective enforcement of norms (judicial system) so that the developed principles are implemented. A stably functioning institutional mechanism has a positive impact on the formation of the socio-economic system. It should also be emphasized that the developed institutional system does not always have to be socially effective and contribute to socio-economic development. Moreover, there are cases where an improperly functioning institutional system operates for many years, and its cemented structure (institutional matrix) prevents the introduction of specific, desired changes that are supposed to improve it. Examples of such improperly functioning institutional systems only confirm how difficult it is to change it (Miłaszewicz, 2011).

5. Railway transport infrastructure

Transport is one of the basic factors of economic development. In his work "New Economic Geography", Paul Krugman included transport and infrastructure among the three key factors explaining the processes of economic development (Fujita, Krugman, 2004). In order for transport to be carried out in an appropriate manner, access to the appropriate transport infrastructure is necessary. This means access to an appropriately developed rail network, which will allow for fast, safe and cost-competitive transport of goods and people. Due to the great importance of transport for the economy, the relevant institutions and authorities in a properly functioning country try to maintain the proper condition of the transport infrastructure. Looking at transport through the prism of the environment in which it is carried out, we can distinguish the following transport: land, water (inland and sea) and air.

Infrastructure is defined as all the devices and institutions necessary for the proper functioning of the economy. We can therefore speak of economic infrastructure, including services in the field of transport, communication, energy, etc., and of social infrastructure (Towpik, 2004).

The entire road network and permanent devices for the three types of transport that are necessary to ensure safe traffic are called transport infrastructure. When it comes to definitions of transport infrastructure, we can find numerous types in the literature. J. Kristiansen stated that transport infrastructure consists of means and conditions that enable the physical flow of people and goods. The function of infrastructure is to ensure broadly understood conditions for production and provision of services. According to him, technical conditions consist of two components: material equipment and program equipment. Material equipment is a synonym for transport infrastructure understood in the traditional sense, i.e. material, physical elements, such as motorways, airports, railway network or sea ports. Material resources are intended to create conditions for transport activity and logistic processes. In contrast, the program equipment is the general organizational structures, as well as the overall information system operating within this sector. Institutional conditions, in turn, correspond to the general "rules of the game" and mean the legislative framework and statutory instruments that regulate transport services, as well as traffic management and supervision systems. D. Biehl believes that infrastructure is a direct tool of government policy. According to him, a long-term development strategy requires an increase in public resources, which means investments in infrastructure. Planning, implementing and financing such investments is the most important instrument of regional policy (Domańska, 2006). As Kazimierz Towpik notes, the directions of development of transport infrastructure, which is one of the most important elements of the country's spatial development, are influenced by: demographic processes (the distribution of population determines the structure of the transport network), the distribution of sources of raw materials and industry, and the settlement structure (Towpik, 2004).

The economic situation in transport is considered a kind of barometer of the economic situation, similarly to the case of construction. The weakening of this branch of the economy indicates an approaching economic slowdown (Tarka, 2012).

The relationship between economic development and transport can be divided into two categories. The first is a passive relationship in which transport responds to changes in the level of economic activity. The second type is an active relationship in which transport affects the state of the economy. Transport in the economy plays a kind of role of both a recipient and a donor. According to Tadeusz Szczepaniak, as a giver, transport enables the exchange of goods and services. It transports raw materials, materials and semi-finished products intended for production use and finished products intended for personal consumption. Both types of movements support the sphere of goods exchange, both domestic and foreign. Transport is therefore a continuation of production in the sphere of turnover as the last phase of the broadly understood production cycle. In addition to serving the material production departments, transport also serves non-production departments, and also provides services for the population, satisfies the individual communication needs of the population, activates socio-economic and cultural life, and promotes the development of tourism. In turn, as a recipient, the transport sector, reporting demand for, for example, new vehicles or fuels, is served by other sectors of the economy. Thus, the dependencies between transport and other sectors of the economy are mutual (Szczepaniak, 1985).

There are mutual connections between transport and other sectors of the national economy. For this reason, national and local government authorities, wishing to stimulate economic growth and development, must also take care of the appropriate level of transport infrastructure. An underdeveloped transport network causes difficulties in communication. The lack of a transport network in certain areas of the country causes their exclusion from the country's development processes. A poor communication network does not encourage potential investors to invest capital in areas to which access in the broad sense is impossible or difficult. The communication isolation of the region causes further economic backwardness and, as a consequence, depopulation of such an area and further degradation (Wojtowicz, Olechnicka, 2016). In turn, too densely developed transport infrastructure can be a burden on the budget due to the need to maintain the usability of this infrastructure at a certain level. Another threat resulting from excessive infrastructure development is the degradation of the natural environment. This degradation appears in the situation of cutting down large areas of forests or running the transport network through areas covered by environmental protection. Moreover, too high density of the infrastructure network may constitute a nuisance for people living nearby (Kuzior, Staszek, 2021).

Transport infrastructure is influenced not only by domestic policy, but also by foreign policy. Moreover, the entire infrastructure policy of the country is also influenced by non-governmental organizations, an example of which are environmental organizations. Thus, the entities in infrastructure policy in the macroeconomic dimension are state and nonstate bodies. The main assumption of infrastructure policy is to create and maintain a coherent transport system. General concepts of infrastructure policy refer to the implementation of tasks such as: modernization of the transport system, construction of functional infrastructure structures that translate into the economic development of the country. The scope of activities of infrastructure policy includes:

- development of the road/railway network and stations (points) and transport hubs; protection of the natural environment,
- improvement of transport safety through the use of the latest technologies,
- activities aimed at improving the transport of goods and people (Tarka, 2012).

It is an undeniable fact that the availability of a minimum amount of infrastructure is a necessary condition for economic growth and development. However, it should also be taken into account that expanding the transport network above a certain value may not result in further improvement of the country's economic situation. After exceeding a certain level, depreciation increases, which limits the growth of income (Goczek, 2011).

Rail transport is one of the branches of land transport and its operation is based on the transport of people and cargo using rail transport means on a specially designated and built for this purpose transport route - a railway line. Rail transport is a branch of the economy, the operation and development possibilities of which depend to a large extent on its infrastructure. The beginning of rail transport is usually considered to be the year 1825, when the first line with passenger traffic was launched in England (Towpik, 2004).

Railway infrastructure, as defined in the Rail Transport Act (Act of 28 March 2003), is railway lines and other structures, buildings and equipment together with the land occupied for them, located on railway premises, intended for management, handling the transport of people and goods, as well as maintaining the necessary property of the infrastructure manager for this purpose. In general, railway infrastructure can be defined as a set of devices, buildings and structures that enable efficient and safe rail transport. Railway infrastructure can be divided into point and linear. Point infrastructure, which includes, among others: passenger stations, freight stations, junctions, intermodal transhipment terminals, warehouses, yards and ramps, humps, is primarily used to handle passengers during the boarding/disembarking process and cargo during loading and unloading. Linear infrastructure includes railway lines along with elements dividing them, i.e. sections, routes, which in turn enables the implementation of the basic function of rail transport, i.e. moving cargo or passengers from the point of origin to the point of destination, using rail transport (Pietrzak Krystian, Pietrzak Oliwia, 2013). A railway includes the surface, track bed, safety devices and train traffic control (Towpik, 2004).

The basic elements of the railway network are railway lines and the operating points (network nodes) located on them. One can distinguish between elementary, basic and main network components. The elementary network components are route tracks, side tracks and track nodes. The basic network components are created from elementary components - traffic posts, groups of tracks with separate functions. The main network components are routes with intermediate stations, junction stations, special stations (Towpik, 2004).

It should be emphasized that transport infrastructure is a fundamental factor in the development of each national economy, as well as its individual segments. Transport infrastructure is characterized by high capital intensity, long usability and immobility. This type of infrastructure is referred to as a load-bearing system, as it allows for the creation of a network of connections in a spatial arrangement and creates conditions for socio-economic development (Szaruga, Załoga, 2014).

6. Institutions in the political subsystem

Within the political subsystem, the broadly understood state and its institutions are of the greatest importance. The role of the state today is to shape, implement, and enforce legal regulations. In order to implement socio-economic development, and thus the development of railway infrastructure, it is necessary to create an appropriate institutional system. State institutions, through their prerogatives, have the ability to create appropriate legal regulations and institutional solutions to enable and facilitate these activities (Bentkowska, 2020).

It is worth noting that broadly understood socio-economic development is not possible in a country where legal regulations are not observed and where the functioning of economic entities is difficult. It should be noted that in a weak country we are dealing with weak institutions, i.e. those that do not function properly. At the same time, the lack of efficient institutions discourages potential investors from investing their capital in such a country. Moreover, conducting business activity in a country with weak institutions results in the fact that running such institutions is associated with greater risk and, at the same time, with higher transaction costs (Legiedź, 2013). Due to the fact that effectively functioning institutions translate into economic growth, it is in the interest of the state that institutions function properly (Kuder, 2008). It should be emphasized that creating an appropriate institutional system, one in which efficient socio-economic development will be possible, is not an easy task. It should be noted that the shape of institutions in the political subsystem is influenced not only by entities from political circles, but also by specific interest groups and lobbyists. Such interactions may have a positive or negative impact on the set of institutions created in the political subsystem (Bentkowska, 2020).

Moreover, properly functioning institutions contribute to limiting uncertainty and increasing trust. In turn, greater trust, both in state institutions and entities operating on the market, contributes to limiting the destabilization of economic processes. Thus, economic crises can be limited, either due to their frequency or intensity (Kuder, 2008).

Another function performed by institutions in the political subsystem is to ensure broadly understood security. Properly functioning institutions should take care of law and order in the country. This encourages potential investors to locate their businesses in a given country. Ensuring security within state structures reduces the risk associated with the destruction or theft of assets located there. Therefore, ensuring appropriate protection from institutions functioning in the political subsystem translates into an increase in the attractiveness of a given country in the eyes of investors. This factor is of significant importance in a situation when a country is located in geopolitically unstable areas (Miłaszewicz, 2011).

The state as an institution in the political subsystem has the ability to influence not only changes in the area of formal institutions through appropriate legislative processes, but also has the ability to influence informal institutions. Stimulating changes in informal institutions is possible by creating specific patterns of behaviour, by introducing a specific policy, forming specific attitudes or by supporting specific social activities (Bentkowska, 2020).

7. Institutions in the economic subsystem

Another subsystem that influences the institutional system is the economic subsystem. It should be emphasized, however, that the boundary between the political subsystem and the economic subsystem is not very sharp and that these systems often interpenetrate and complement each other. This is due to the large connections that exist between them. In this way, the economic subsystem influences the political subsystem and vice versa.

A number of different types of institutions operating in the economic subsystem should provide appropriate conditions for the socio-economic development of the state. At the same time, they should limit and neutralize undesirable phenomena appearing in the economy and resulting from the imperfection of economic processes, i.e. broadly understood market failure. By using these institutions, a more sustainable and predictable development of the economy and economic entities operating within it is possible. Therefore, creating and using appropriate institutions in the economic subsystem allows for better use of available resources, as well as reducing costs that appear in economic processes. Institutions in the economic subsystem are responsible for creating appropriate conditions for broadly understood socio-economic development. On the one hand, they are tasked with stabilizing the financial, monetary and tax systems. This is important because the role of these systems is to create such financial and tax conditions that support the economic development of the country. On the other hand, institutions are tasked with stimulating processes that contribute to economic growth and development (Bentkowska, 2020).

A stable financial system allows for efficient market transactions and facilitates the acquisition of capital needed for investment processes. In addition, a balanced financial system translates into building stability on financial markets, which in turn is reflected in the peace of mind of investors and other participants in the economic system. A financial system that is based on solid institutional foundations also allows for the reduction of various types of risks occurring during economic activity, including transaction costs. Moreover, the clarity and transparency of the rules in force in the financial system allows for building trust in the eyes of investors (Owsiak, 2015).

A broadly developed and well-functioning banking system facilitates the functioning of all entities that are part of the economic system. It allows for obtaining the necessary financial resources and provides the opportunity to safely accumulate savings. A stable banking system as an institution of public trust allows for avoiding unnecessary turbulence and uncertainty occurring on financial markets. An efficiently functioning banking system is of great importance for the functioning of the market economy. Its most important and fundamental task is to provide financial resources needed to implement various types of investments, including infrastructure investments. Credit activity conducted by the banking system allows for the propulsion of private and public investments, due to the fact that a significant part of them is financed from credit. For this reason, the lack of a healthy banking system would result in limited possibilities for obtaining the necessary capital. In addition, commercial banks enable and facilitate financial transactions between domestic and foreign entities. They also provide various types of guarantees and sureties, which additionally secure the parties to the transactions carried out. In this way, banks reduce uncertainty and contribute to reducing transaction costs (Begg, Fischer, Dornbusch, 2007).

Another important aspect is the stability of the monetary system. Institutions responsible for managing monetary policy are responsible for maintaining the appropriate value of money and for ensuring that the appropriate amount of it is on the financial market. A well-established monetary system, similarly to the financial system, allows for attracting investors and influences the acceleration of socio-economic development processes. An appropriate monetary policy allows for avoiding deflationary and inflationary processes that adversely affect the state's economy and the investment activities of various entities. The institution of the central bank is responsible for the stability of the monetary system. However, it should be remembered that the state also has an influence on monetary policy, to a limited and indirect extent, but it does have one. It results, for example, from the greater demand of the state (government) for money that is to be allocated for specific investment purposes.

The conduct of appropriate monetary policy by institutions established for this purpose allows for maintaining price stability, which in turn is a necessary condition for enterprises and individuals to predict investment and consumption expenditures. Price instability limits these possibilities and does not promote economic development. The central bank of the state, as an institution dealing with monetary policy, is also responsible for influencing the exchange rate of the national currency in such a way as to enable favorable trade with foreign entities (Włudyka, Smaga, 2018).

Another system that is created by the appropriate institutions in the economic subsystem is the tax system. Budget policy (also called fiscal policy), alongside monetary policy, is an important element of the state's financial policy. The basic goal that state institutions try to achieve by implementing fiscal policy is to ensure lasting and stable economic growth. As part of an active fiscal policy conducted by the central or local government, it is possible to implement various types of investments, including infrastructure investments. Active economic policy conducted by the appropriate institutions is also aimed at preventing the overheating of the economic situation, which could result in inflation (Winiarski, 2006).

The basic instrument used to implement fiscal policy is the tax system. It should be emphasized that by creating an appropriate tax policy, it is possible to influence entities operating in the economic system. In this way, institutions involved in creating tax policy can stimulate or inhibit investment processes, as well as influence the economic situation. Predictable and low taxation encourages domestic and foreign entities to invest in such a country. Too frequent changes in the tax system translate into a sense of instability and uncertainty in the eyes of potential investors. For this reason, institutions responsible for creating tax policy in the country should carry out their activities in a predictable and transparent manner (Włudyka, Smaga, 2018).

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