Institutions and Economic Development: A More Complete View to Understanding Economic Growth

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Abstract

The Great Crisis has opened a vivid discussion on the shortcomings of the mainstream economics. Neoclassical economics itself is insufficient in explaining the complex reality. This paper therefore introduces an alternative economic approach to analysing economic growth and development, which provides a more realistic insight into the causes of the wealth of nations. We utilize the “toolbox” of institutional economics and try to find the ultimate causes of differences in the economic development between countries. Via four real-world cases we show how political and economic institutions affect economies and thus determine economic growth.

Keywords: development, institutions

JEL codes: B15, O25, O24, O43
1. Introduction

Why are some countries rich and others poor? This question of economic growth and prosperity of nations has puzzled economists for centuries, beginning with the Father of Economics Adam Smith and other classical authors, who believed the causes of wealth to be associated with the accumulation of factors of production. Following the decline of classical economic theory in the last quarter of the 19th century, analysis of market equilibrium became the predominant form of economics; in other words, paradigm of growth (a dynamic concept) was replaced by the paradigm of equilibrium (static concept), which has remained in the framework of the neoclassical economic theory up to this day. The issue of economic growth has been dealt with by other heterodox economists, who criticized the abstract approach of mainstream economics in understanding the complex reality of growth - they have attempted to take into consideration the characteristics of national economies, and thus develop a more comprehensive analysis of the causes of wealth of nations. Unfortunately, these economic theories have remained in the shadow of the dominant neoclassical paradigm.

The purpose of this paper is to present a somehow more complete economic approach to analysing economic growth and development. More specifically, to present that the framework of institutional economics provides a more realistic insight into the causes of wealth of nations.

We begin our appraisal with a review of development of institutional economics; this provides a basis for further discussion of the institutional approach to analysing economic growth. In section 3 we focus on the application of this approach to real-world examples. In section 4 we examine the empirical approaches used by economists to systematically assess the impact of institutions on economic growth. Section 5 concludes.

2. Short Introduction into Development of Institutional Economics

The term “institutional economics” was first used by American economist Walton Hamilton at the conference of the American Economic Association in 1918. Institutional economists view market as a social space, where institutions, in contrast to the neoclassical economics’ supply and demand, play a key role. The main
shortcoming of traditional institutional economics has been a lack of systematic and comprehensive empirical analysis (Hodgson, 2000).

In the 20th century traditional institutional economics was “replaced” by more popular new institutional economics (NIE), which tries to integrate new theoretical insights such as the theory of organizations, transaction costs, ownership rights, etc. into mainstream neoclassical economics. The same as members of traditional institutional economics, new institutional economists emphasizes that the dominant economics is strong in theory, but weak in explaining economic reality, because it studies only “the circulation of blood without a body”. He continues that the focus of economists has to be the analysis of the economic system, where goods and services are exchanged, because that process is essential for human well-being. This exchange is based on various institutions that “government of an economy, and it is this that gives the NIE its importance for economists.” (Coase, 1998)

We would like to emphasize, that NIE does not change the general methodology of neoclassical economics, as it is based on similar underlying assumptions, however, it does take into consideration the environment in which the agents function and that gives the NIE additional explanatory power in understanding the economic development.

Before moving on we ought to look at key features of the NIE (Joskow, 2004; North, 1993):

- institutions in society are not understood in a narrow, formalized sense, but as a key component of the economy (social, political, legal and economic norms);
- dynamically analyses technology and technological progress and impact of institutions;
- is aware of limitations of the basic concepts of neoclassical economics and introduces a new analytical and empirical methods into economic analysis
- interdisciplinary: views economics from different angles and takes into account the knowledge of other disciplines (sociology, history, law, biology, psychology);
- emphasizes the non-universality of economic theory.

At this point we have to answer what institutions basically are. Menard & Shirley (2011) describe them as “all rules or forms of conduct, which are devised with the intention of reducing
uncertainty (as a consequence of imperfect information and limited rationality), controlling the environment/game and lowering transaction costs.” Table 1 shows various classifications of institutions.

Proponents of the institutional economics systematically study the relationship between the relevant institutions and economic reality based on four levels of social analysis. Most economists are focusing on the analysis of the 2nd and 3rd level; namely institutional environment and governance. On the one hand, the 1st level represents restrictions to higher levels but on the other hand the nature of these embedded institutions is subject to slow changes, therefore economists do not pay much attention to it. The NIE does not directly deal with 4th level either, because this stage of analysis is the field of neoclassical economics (efficient allocation). In contrast, 2nd and 3rd levels are subject to faster changes; according to Williamson, there are first-order economizing (»get the formal rules right«) and second-order economizing (»get the governance structures right«). Therefore, institutional economists focus mainly on the analysis of the institutional environment and institutions of governance (Williamson, 2000).

3. Institutional Economics and Economic Development

We have come to the point, when we can finally discuss the introductory line of this paper - why are some countries rich and others poor?

If we just glimpse at the data on human development index (an index, which is based on three equally weighted components: longevity, knowledge and standard of living), we find out that the most developed countries in the world in year 2011 were The Netherlands, US, New Zealand, Canada, Ireland, Germany and Sweden (values of HDI index equal to 0.91) and the poorest were Congo, Niger, Burundi and Mozambique (values HDI index from 0.29 to 0.32) (Economics Online: Economic Development, 2016). The standard mainstream economics reasons to such differences would be in either poorer technology, lack of physical capital, less educated people, shorter life expectancy, poorer infrastructure, inefficient allocation of resources etc. in poorer countries. It is true that these factors decrease the economic activity, but “they are not causes of growth, they are growth”, that is why we need to find the fundamental causes of poverty. The right questions to ask at this point would be why poor countries invest
less in physical and human capital, why is their production inefficiently organized etc. (Gottfries, 2013). Because of institutions, or to put it differently “institutions are one of the ultimate causes of growth”. That is why institutional economics emphasizes the importance of analysing institutional environment of the country in order to fully understand the economic development (Williamson, 2000).

Economic and political institutions have had an important impact on the economic growth. That is why Daron Acemoglu and James Robinson (2010) developed a model based on relations between three elements: (1) economic institutions, (2) political power and (3) political institutions. Economic institutions have a major impact on growth. They directly influence investments in physical and human capital, technology and organization of production. Therefore, economic institutions determine the size of potential GDP and play a major role in the distribution of added value among social groups. Acemoglu and Robinson (2010) believe collective decisions of society have a great impact on the equilibrium of economic institutions, because institutions have different outcomes for individuals and social groups. The winner in that process is the social group that has more political power. In their model, political power is divided into de jure and de facto political power. De jure political power originates from political institutions, while de facto political power originates from the ability of a social group to assert their interests, which itself depends on the distribution of resources. The key factor in the model is persistence. The mechanism of persistence influences political institutions and the distribution of resources, which are also determined by collective decisions of society. Collective decisions, as we have already seen, depend on the distribution of political power. This creates central mechanism of persistence: political institutions allocate the de jure political power and the social group that has that power shapes political institutions in their favour. The second mechanism of persistence comes out of the distribution of resources: the social group that is relatively richer has more de facto political power and can therefore influence political and economic institutions that comply with their interests. Authors also emphasize the importance of critical junctures that shape the evolution of institutions (Acemoglu et al., 2004).

Countries have different political and economic institutions, which is why Acemoglu and Robinson (2010) classify them into inclusive and extractive institutions. Inclusive
economic institutions encourage the participation of citizens in economic activities, where they can show their talents and qualities. The main characteristics of inclusive institutions are widely-spread property rights, impartial legal system and efficient supply of public service, which provides all citizens with the same starting position. Inclusive economic institutions therefore accelerate economic activity, productivity growth and welfare. On the other hand, extractive economic institutions can also lead to growth, which is as we will see unsustainable. Governing elites invest in some sectors in order to extract profit for themselves. This growth differs from the growth under inclusive institutions, as it does not cause creative destruction, which is necessary for endurable economics growth (new technologies, processes, innovations etc.). Creative destruction causes a different distribution of economic resources, which influences the de facto political power of the social group. That is why the governing elite may find themselves on the “losing” side, which is why they rather start slowing down the technological progress.

Apart from that Acemoglu and Robinson (2010) also distinguish between inclusive and extractive political institutions. Inclusive political institutions should fulfil two conditions: they must be centralized and plural at the same time. Otherwise the institutions are classified as extractive. Extractive political institutions concentrate the political power in governing elites which have full power. These extractive political institutions enable elites to control the economic institutions. On the other hand, inclusive political institutions enable widely distributed political power and allocation of resources throughout the society.

4. Real-World Examples: Institutions and Growth Dynamics

This section will put theory to the test; via four real-world cases we will see how the political and economic institutions have affected economies and thus determined long-term growth and development of nations.

First Case Study: Latin vs. North America

Looking at USA (North America) and Mexico (Latin America) gives us an illustrative example of why institutions matter; if we want to fully explain today’s institutional differences between these two countries, we have to analyse their historical evolution
since the era of colonization. As we know Latin America was mostly colonized by two European imperial powers - Spain and Portugal. Their method of colonization was based on the subjugation of the indigenous ruler. This way they established an exploitative rule over all other natives - this marks the beginning of extractive institutions called "Encomienda". All the wealth of Latin America was consequently canalized to imperial forces and this further strengthened the rule of extractive institutions (Acemoglu & Robinson, 2010).

During the period of most intense colonization of Latin America, England was a minor European power, which was recovering from civil war. After its triumph in the naval battle with Spain, England consolidated its maritime power and began colonizing North America; not because it would have been economically attractive, but because it was the only American territory that remained uncolonized. The purpose of the English Empire was the same as that of Spain and Portugal; to obtain as much gold and silver as they possibly can. However, they soon realized that the situation in North America did not allow that. One of the Presidents of the Virginia Company was thinking as follows: "There are no gold or precious metals, and the indigenous people could not be forced to work or provide food. The colonists will have to be the ones who will work!" He requested from his home country not to send more gold seekers, but rather to send people with a "real profession" (i.e. masons, fishermen, farmers...). Soon after they devised incentives for settlers in the form of the "head right system", which gave every man 50 acres of land and a further 50 acres for each family member. In 1619, General Assembly was established, where each man had the right to participate in the shaping of institutions - this marks the beginning of the development of inclusive institutions. Of course the elite was still fighting for their own interests, but their power was declining. Until 1720 the structure of institutions in all 13 British colonies was similar; there was no democracy (slaves' and women's rights etc.), but at least political power was widely spread. The influence of England started declining and in 1776 the colonies declared their independence (Acemoglu & Robinson, 2012).

A similar development of institutions continued on. Confusion in the Spanish Kingdom and the fear of colonial elites of losing privileges led to the declaration of independence of the colonies of Latin America from Spain. Consequently, exploitative regimes continued. On the other hand, evolution of inclusive institutions in North
America carried on. Civil war unfolded in the favour of the Union and slavery was slowly abolished (mainly in the northern part). After several years of political and economic instability, growth returned, while in independent Mexico political instability lasted for nearly 50 years. This instability has further affected economic as well as political institutions - property rights were not protected, monopolies have blocked economic incentives, in short the exploitation of people continued. Meanwhile economic institutions in the US were under the influence of the inclusive political institutions, which created incentives for all segments of the population. Patent laws were designed, and in the 19th century the banking industry gained momentum and lent money to promising new businesses, which stimulated economic growth. In the 20th century, the regimes of Latin America’s countries became more democratic, but the centuries long tradition of exploitative institutions has been difficult to replace. To highlight this fact let us compare the differences in the accumulation of wealth of two businessmen, namely Bill Gates and Carlos Slim. They both are among the richest people in the world. Bill Gates made his fortune through innovation. Conversely, Carlos Slim, the Mexican tycoon, accumulated his wealth through monopolies, which he acquired during the privatization of the national telecom in 1990 (Acemoglu & Robinson, 2012).

We can see that the theory explains the relationship between the evolution of institutions in the US and Mexico and economic development quite well. However, we believe that today’s US institutions are moving away from inclusive, which is currently being reflected in the development of the US economy. Especially after the 70s the economic ideology of the free market, which has been promoted by Milton Friedman, paved the way to broad deregulation (deregulation of the financial sector, tax reform ...), which, in our opinion, allowed enormous enrichment of a narrow elite at the expense of the middle class. This has increased their de facto political power, making it possible to further move away from institutions that facilitate economic incentives and wider participation of the crowd. Such dynamics of evolution in the direction of extractive institutions threatens the further sustainable development of the US economy.
Second Case Study: critical junctures and institutions

In the first case study we have explained the basic logic of the model developed by Acemoglu and Robinson. This case study will introduce us to the importance of specific shocks ("critical junctures") in the evolution of institutions. As we have seen in the previous case, the extractive institutions have appeared throughout history in Latin America; extractive political institutions (de jure political power) have led to extractive economic institutions, which allocate resources to the few in power and amplify their de facto political power in maintaining the status quo - we are talking about the vicious circle of poverty (Acemoglu & Robinson, 2012). However, certain critical junctures may produce changes in the political and economic institutions that lead to transitions. Institutional drift plays a key role in this process; it is smaller at the beginning, but then gets bigger, and so influences the evolution of these institutions. Let us look at the case of England.

After the fall of the Roman Empire, England’s economic activity was gradually slowing; institutions like money, urban settlements, schools, etc., which were enforced by the Romans, were slowly disappearing and 5th century England became poor. However, that is precisely where the first inclusive institutions occurred, which consequently led to the Industrial Revolution about a thousand years later. “Black death” that affected medieval Europe and led to social, economic and political change played a major role in creating so called institutional drift. The plague in England created a labour shortage, which led to a fundamental change in feudalism, the social system in place in Europe at the time. Farmers came together in peasant uprisings and demanded more rights; their status was gradually improved. Their wages and consequently the de facto political power were slowly growing. England began institutionally diverging from the rest of Europe. Nevertheless, the 16th century political and economic institutions have not yet been sufficiently inclusive to allow technological progress, as evidenced by the story of the innovator William Lee, inventor of the knitting device, which would significantly speed up the process. His invention was presented to Queen Elizabeth I, unfortunately her answer was negative: "Thou aimest high, Master Lee. Consider what thou the invention could do to my poor subjects. It would assuredly bring to them ruin by depriving them of employment, thus making them beggars."

The queen was obviously afraid that an innovation like this would lead to political instability due to unemployment, which would undermine her political power.
(Acemoglu & Robinson, 2012). In the 16th century the second important shock followed, which has paved the way to inclusive institutions, namely the Atlantic trade. It generated higher profits for traders and other social groups, which strengthen their de facto political power. Conflicts between monarchs and other social groups, which had begun with the signing of Magna Charta, continued, which led to two key events: Civil War (1642) and the Glorious Revolution (1688). Both milestones hindered de jure political power of the king and shifted it to the parliament (Acemoglu et al, 2005). The government introduced a number of inclusive political (broader voting rights, the possibility of petitions, executive and legislative authority under the domain of the parliament) and economic institutions, which promoted investment, trade and innovation. These foundations later proved to be crucial for the beginning of the Industrial Revolution, as they enabled men like James Watt (inventor of the steam engine), Richard Arkwright (inventor of the spinning machine) etc. to realize their ideas and sell them for a profit. Technological progress, new businesses, investments and efficient use of talented workforce empowered by inclusive economic institutions brought about rapid growth and 19th century England became a global superpower.

On the other hand, it is also interesting to ask why other countries have not produced similar industrial revolutions. A detailed analysis would be too extensive for this paper, however, we can highlight an example of the Habsburg Monarchy, which at that time concentrated political power to the monarch. This enabled him to maintain extractive institutions and fight against technological change; as Francis I said in Ljubljana in 1821: “I do not need savants, but good, honest citizens. Your task is to bring young men up to be this. He who serves me must teach what I order him. If anyone can't do this, or comes with new ideas, he can go, or I will remove him.” (Acemoglu & Robinson, 2012)

**Third Case Study: the ascent of the Floating City**

The third case study highlights the dynamics of a virtuous cycle between inclusive political institutions and inclusive economic institutions, which is based on several mechanisms: (1) pluralistic inclusive political institutions make it difficult for dictators to do a unilateral appropriation of political power and ensure the rule of law, which treats every individual equally, (2) inclusive political institutions are accompanied by inclusive economic institutions that create a dynamic economy, which prevents
enormous accumulation of resources in the hands of individuals in a short term and (3) inclusive political institutions allow free media to report on threats to the inclusive. Despite this mechanism, we will see that in the case of Venice, a specific shock can also break the cycle and lead to extractive institutions (Acemoglu & Robinson, 2012).

In the Middle Ages, Venice was one of the richest part of the world with the most inclusive economic institutions, which were supported by inclusive political institutions. Venice became wealthy due to the growth of Mediterranean trade; from the east they were importing spices, from Byzantium processed products and slaves. At its peak Venice had 110,000 inhabitants, three times more than London at the time. One of the key economics institutions that promote the rapid growth of the population was “commenda” or a form of common equity company, which was established only for the duration of a trade mission. “Commenda” worked on the principle of two partners: one remained in Venice and invested the majority of the capital, while other travelled by boat to pick up raw materials. This was particularly encouraging for young people without assets, because they were able to climb up the social ladder. In case of a successful mission gains profits were shared in a ratio of 75% against 25% in favour of the greater investor. Government documents from that time point to big fluctuations of the political elite every year (up to 81%). Economic incentives and increasing equality in the distribution of economic resources had led to a more inclusive political system. However, such growth was accompanied by creative destruction: new faces took advantages of economic incentives and grew rich almost overnight, leading to a reduction of business and profit for existing elites and their political influence became declining. Therefore, there were tendencies in the Great Council to limit new faces in the ruling authority. Gradually, by the year 1297, various institutional bodies were becoming more closed for new entrants and their opportunities were cut off with “La Serrata” or “The Closure”. Consequently, in 1315 the police was established to maintain political power of elites. With their increasing power, elites also had a greater impact on the change of economic institutions towards greater exploitation of the people. The beginning of the end of the Venetian growth came with the abolishment of the “commenda” institution and nationalization of trade in favour of the new Venetian aristocracy. By 1500 population decreased to 100,000. Today tourism is the only economic activity in Venice (Acemoglu & Robinson, 2012).
All things considered, the mechanism of a virtuous cycle is not perfect in the evolution of inclusive institutions because their development can be turned towards greater exploitation of the population.

**Fourth Case Study: implications of creative destruction on economic development**

As we discussed earlier, growth under inclusive institutions differs from growth under extractive institutions. Extractive institutions do not lead to creative destruction, which is necessary for the endurable growth of economy. In this section we will discuss the Soviet Union case.

After the First World War Lenin led the Bolshevik revolution. Until the 1980s many believed Lenin's social order was the future. Three years after Lenin died, Stalin became the “ruler” of USSR. He killed his opponents and continued with the industrialization of the Soviet Union. He wanted to achieve economic growth with government measures, which were financed via taxing the agricultural sector. In order to do that it was necessary to pursue an agricultural collectivization. This process led to “kolkhozes” (joint properties) and decreased production due to insufficient economic incentives. Regardless of the inefficient agricultural and industrial sector, the Soviet Union grew quickly. The reasons why are not difficult to understand. The productivity in heavy industry was high, which lead to growth under extractive institutions. This growth was not a consequence of creative destruction or technological progress; it came out of relocation of labour from the unproductive agricultural sector and accumulation of capital. But as we have already mentioned, that kind of growth is not endurable. Until the 1970 the growth slowed down. There are two main reason for that. Firstly, lack of economic initiatives. Secondly, there were no conditions that would enable growth just because of government measures as all inefficiently used production factors had been allocated to more productive sectors. Therefore, the Soviet Union started to shrink. The only sectors where it was allowed to innovate were military and space technology. If we analyse Soviet Union in detail, we can find a lot of examples of inefficient planning, which we will not discuss here due to space restrictions. However, the main point of this case study is not inefficient planning,
even if it had been efficient, it wouldn’t have led to sustainable growth for as long as it kept blocking creative destructions (Acemoglu & Robinson, 2010).

5. Empirical analysis of institutional economics and new methodological approaches

In the previous chapter, we discussed qualitative examples of the impact of institutions on the economic development, which is affected also by other factors that theory does not take into account because of the interdependent nature of reality. Therefore, it is almost impossible to exclude the effects of other variables. This review will introduce us to the major studies that try to explain the direct impact of the different institutions and economic growth.

Generally, empirical studies have confirmed the positive impact of an inclusive institutional environment on the economic growth. In the article »Determinants of Economic Growth in a Panel of Countries« Roberto Barro (2003) analyses the impact of a wide range of variables on the economic growth on the basis of 113 countries. He notes that the growth of GDP p.c. is positively correlated with the level of education (human capital), life expectancy and the rule-of-law index, while correlation is negative with the following variables: fertility rate and high inflation rate. Statistically significant is also the correlation between growth and democracy of political systems, but it is not linear - it has the shape of an inverted letter U. In terms of our analysis the important variables are the rule-of-law index and indicator of democracy as they both partially cover the quality of institutions and create positive incentives, which empower individuals to use their knowledge and skills and to participate in the process of development. In addition, they ensure the enforcement of property rights, which are a precondition for the efficient functioning of markets (Coase theorem). An interesting correlation is between growth and the indicator of democracy; it is first positive and then negative. If a country has a low baseline level of democracy, greater democratization leads to higher GDP growth. With further democratization the correlation is reversed and becomes negative as the public sector is increasing and becoming inefficient, and conflicts among various social groups are more frequent, which is not productive. A correlation between one of the fundamental concepts of institutional economics, namely the protection of property rights and economic
growth was also analysed by Acemoglu et al. (2004). Results are similar - countries with a higher protection of property rights have higher levels of GDP p.c. Knack and Keefer (1995) also reached a similar finding. However, we have to be careful with the interpretation of simple bivariate regressions, because the interpretation can also go in the opposite direction; only rich countries can afford a high level of protection of property rights. Therefore, there have been several attempts to develop a comprehensive index of quality of the institutions in the last decade, which could be effectively included in the complex regression analysis.

In the article »Institutional Quality Dataset«, Kunčič (2014) introduces a generic indicator of the quality of economic, legal and political institutions, which provides a comparative institutional analysis. He divides countries into five groups; in the first group are the countries with the poorest quality of legal, political and economic institutions, the quality of those is the highest in the fifth group. His comparative analysis shows that a lower quality of institutions leads to lower levels of income per capita or a lower level of development.

Levchenko (2004) draws attention to the importance of the quality of institutions (enforcement of contracts, protection of property rights, the rights of investors) in the international trade between north and south (N-S trade). He notes that institutional differences largely determine bilateral trade flows - international trade is higher in countries which have a relative comparative advantage in the quality of institutions. Anderson and Marcouiller (2000) also show that the correlation between inefficient enforcement of contracts, corruption and international trade is negative.

In hindsight, a set of methods and other empirical tools developed within institutional economics is becoming more widely used in the empirical analysis. Nevertheless, the authors of the articles that include institutions as endogenous variables stress out that there is still plenty of room for improvement in this field of economics.

6. Conclusion

This paper argues that the neoclassical “toolbox” itself is not sufficient in explaining the complex reality of nations’ growth and development dynamics. The key problem
of this branch of economics are too restrictive assumptions that might hide away the complexity of everyday reality and would consequently not be useful in identifying the key drivers of economic growth and development. This paper therefore introduces a more complete view to understanding economic growth and development, which provides a comprehensive insight into the causes of the wealth of nations, namely institutional economics.

We claim that institutions play a key role in the economic development. According to Acemoglu and Robinson’s model political and economic institutions have a major influence on sustainable economic growth. On one hand, inclusive economic institutions encourage the participation of broad masses of people in economic activities, which means they can enforce their talents and skills and thus contribute to the growth (see examples of USA and England). On the other hand, the extractive economic institutions often lead to unsustainable growth, as we saw in the cases of Latin America and the USSR. As we have seen, political power plays a key role in the establishment of economic institutions. It originates from the distribution of resources and political institutions. The latter are also divided into inclusive and extractive. Inclusive political institutions must satisfy two conditions: centralization and pluralism. If at least one of the conditions is not met, we talk about extractive political institutions, which usually concentrate political power in the hands of a ruling elite. Lastly, the case of England and Venice showed that institutions are subjected to specific shocks or critical junctures that can alter their evolution.

Such a comprehensive analysis of economic growth and development in our view presents a significant contribution to the relevance of economic theory. Differences in the wealth of nations are caused by discrepancies in the quality or inclusiveness of the institutional environment. Nations that have historically been able to develop inclusive institutions grow faster and achieve higher levels of prosperity. In contrast, nations that have extractive institutions lag behind. Due to this fundamental role of institutions we should not take them for granted. Institutions are result of historical and current interactions between individuals and social groups; a process that we must actively build together as economists. Only in this case will institutions serve the broader public interest and contribute to the collective well-being.
7. Bibliography


Table 1: Classification of Institutions

<table>
<thead>
<tr>
<th>Classification 1</th>
<th>Classification 2</th>
<th>Classification 3</th>
<th>Source: North (2003), Joskow (2004), Williamson (2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Douglass North (degree of formality)</td>
<td>Oliver E. Williamson (degree of embeddedness)</td>
<td>Paul Joskow (subject categories)</td>
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<tr>
<td><strong>Formal institutions</strong></td>
<td><strong>Level 1: Embedded institutions</strong></td>
<td><strong>Legal institutions</strong></td>
<td>statute or common law, regulations and any other rules to which people explicitly subscribe</td>
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<tr>
<td><strong>Informal institutions</strong></td>
<td><strong>Level 2: Institutional environment</strong></td>
<td><strong>Political institutions</strong></td>
<td>norms, conventions, codes of conduct, which are not explicitly written down</td>
</tr>
<tr>
<td><strong>Classification 1</strong></td>
<td><strong>Level 3: Institutions of governance</strong></td>
<td><strong>Economic institutions</strong></td>
<td>informal institutions, customs, traditions, norms, religion</td>
</tr>
<tr>
<td><strong>Classification 2</strong></td>
<td><strong>Level 4: Resource allocation and employment</strong></td>
<td><strong>Social institutions</strong></td>
<td>formal rules of game - property (polity, judiciary, bureaucracy)</td>
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<td><strong>Classification 3</strong></td>
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<td>play of the game – contract (aligning governance structures with transactions)</td>
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<td>prices and quantities; incentive alignment</td>
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<td>public or state devised legal institutions and private legal institutions</td>
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<td>electoral rules, political parties and rules of and limits of a government or state</td>
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<td>ensuring a properly working market</td>
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<td>norms, beliefs, trust, civic cooperation, social capital and social networks</td>
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