# The Connection between Institutions and Economic Development – the Work of the 2024 Nobel Laureates in Economics\*

## István Kónya 💿

In 2024, the Nobel Prize in Economic Sciences was shared between Daron Acemoglu, Simon Johnson and James Robinson for their research on 'the formation of institutions and their impact on development'. One fundamental question in economics is why different countries have reached radically different levels of development. It is now generally accepted that the role of the institutions that regulate the functioning of the economic and political system is pivotal in this issue. The laureates made a huge step forward in exploring the causal link between institutions and economic development. They convincingly demonstrated that the adequate protection of property rights had a substantial positive impact on long-term economic development. Another key scientific achievement of the researchers was the endogenisation of the formation and evolution of institutions. The research programme of Acemoglu and Robinson shed light on why and under what circumstances policymakers choose institutions that help (or hinder) economic development.

#### Journal of Economic Literature (JEL) codes: O11, O47, P14, P16

Keywords: Nobel Prize, development economics, institutions

# 1. Introduction

In 2024, the Nobel Prize in Economics was shared between Daron Acemoglu, Simon Johnson and James Robinson for their research on 'the formation of institutions and their impact on development'.<sup>1</sup> This was not the first time that the role of institutions in the inequalities between countries had been emphasised, and the 2024 laureates were not the first to be associated with this idea. At the same time,

The first version of the Hungarian manuscript was received on 23 January 2025.

DOI: https://doi.org/10.33893/FER.24.1.132

<sup>\*</sup> The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

István Kónya: Corvinus University of Budapest, Dean of the Doctoral Schools; Centre for Economic and Regional Studies (HUN-REN), Scientific Advisor. Email: istvan.konya@uni-corvinus.hu

<sup>&</sup>lt;sup>1</sup> This paper relies heavily on the official publication detailing the scientific work of the laureates, which was published when the prize was awarded (*Nobel 2024*).

they played a major role in two important issues that were previously difficult to examine using economic methods.

The ultimate subject of economic analysis is the individual. The study of income and social inequalities also focuses on the individual. However, as the Nobel Prize committee's factsheet also notes, differences in development between countries account for about two-thirds of global income inequality between individuals:

The poorest 50 percent of the global population earns less than a tenth of total income and owns just 2 percent of total net wealth. This inequality is primarily driven by disparities between countries, which contribute to approximately two-thirds of global income inequality. (Nobel 2024: 1)

The scarcity of macroeconomic data and the ubiquitous interdependencies (endogeneity) make it particularly difficult to identify the causal relationship between institutions and development. Using innovative data and econometric methodology, Acemoglu, Johnson and Robinson convincingly demonstrated that one fundamental feature of market economies – the effective protection of property rights – had a positive impact on long-term economic development. Although certain details of the methodology are disputable, the main conclusion is soundly argued and the research programme can be considered groundbreaking.

Another fundamental question is why, if there are better and worse institutions in terms of development, certain countries choose the latter, why bad institutions can persist, and under what circumstances they may change for the better. Two of the laureates, Acemoglu and Robinson, provided substantive answers to these dilemmas in joint articles and in articles co-authored with others. To do this, they used dynamic games, a methodological tool of game theory. Their theoretical work and related empirical articles established a new branch of literature that has now expanded significantly.

Why is it important to examine economic development? What are the 'institutions' that may help us understand differences in development? What recommendations can a researcher studying these issues offer to policymakers? These are perhaps the most fundamental questions in economics, to which there are no comprehensive and reassuring answers. However, the work of the laureates has provided important tools and methods to address the questions raised, in a meaningful way.



while the vertical axis indicates the rule of law index for 2022 of the V-Dem project 2024. Source: Maddison database (https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/ maddison-project-database-2023?lang=en)<sup>2</sup> and V-Dem database<sup>3</sup> (https://v-dem.net/data/the-v-demdataset/)

The outline of the problem is illustrated in *Figure 1*. In the figure, each observation represents an individual country. The horizontal axis shows the logarithm of the country's GDP per capita measured in purchasing power parity, while the vertical axis is the V-Dem 2024 rule of law index for 2022 (higher values indicate stronger rule of law). The index takes into account factors such as a government's respect for the law, the independence of the judiciary, the ease of access to justice, the level of corruption and the impartiality of the bureaucracy. The red line is a simple

<sup>&</sup>lt;sup>2</sup> For the most recent estimates, see Bolt and Van Zanden (2024).

<sup>&</sup>lt;sup>3</sup> Pemstein et al. (2024).

regression line applied to the scatter plot, which measures the strength of the cross-sectional relationship between the two indicators.<sup>4</sup>

Even though the correlation is not particularly strong, there is a clear positive relationship between the degree of the rule of law and the level of development. It is particularly interesting to note that the most developed nations have a consistently high rule of law index.<sup>5,6</sup> Clearly, the conclusion is that developed economies cannot exist without the rule of law. At the same time, unsurprisingly, the opposite is not true, since economic development may depend on many other factors.

Naturally, *Figure 1* shows correlation, not causation. It is possible that the establishment of the rule of law will, in time, lead to economic development, or at least be a precondition for it. On the other hand, reverse causality is also possible – sufficiently wealthy societies can afford the 'luxury' of the rule of law. The socio-political reasons for this latter effect may be manifold. The joint research programme of the recent Nobel Prize laureates focused on the former direction, i.e. the causal impact of institutions on growth. The latter possibility, i.e. bidirectional causality, was analysed by Acemoglu and Robinson in several studies. We will discuss these possibilities in detail later, but first we briefly outline the careers of the 2024 laureates.

Daron Acemoglu is a professor at the Massachusetts Institute of Technology (MIT), where he has been researching and teaching since 1993. He grew up in Turkey and received his PhD from the London School of Economics in 1992. His main research interests include economic growth, political economy, income inequality and technological change. He is a leading exponent of the 'new institutional economics' school. In addition to his Nobel Prize-winning work, he has made seminal contributions to the fields of economic growth, the labour market implications of robotisation, business cycles and inter-industry linkages, technological progress and income inequality research.

Simon Johnson is a professor at the MIT Sloan School of Management. He was born and educated in the UK and holds a PhD from MIT. His main areas of research are political economy and development economics, and his experience in these fields was put to practical use as Chief Economist at the International Monetary Fund between 2007 and 2008. He is also active in the research areas of economic development, public health and the transition to a market economy.

<sup>&</sup>lt;sup>4</sup> The rule of law indicator shown is one – not necessarily the best one – of the metrics that can be used for measuring the most important institutions in terms of development. I have opted to include it here as an illustration because of its easy availability.

<sup>&</sup>lt;sup>5</sup> The only partial exceptions are the countries of the Persian Gulf, rich in oil and gas.

<sup>&</sup>lt;sup>6</sup> Because of the logarithmic scale of GDP per capita, advanced economies are horizontally concentrated relative to low-income countries.

James Robinson is a professor at the University of Chicago, where he has been teaching and researching since 2015. He grew up in the UK and holds a PhD from Yale University. His main research interests are political economy and development economics. In addition to his academic articles, he is the co-author with Acemoglu of the internationally acclaimed and influential book 'Why Nations Fail' (*Acemoglu* and *Robinson 2012*). In addition to his Nobel Prize-winning work, he has carried out detailed studies of the economies of Africa and Latin America, both through economic history and field research.

Table 1   Science metrics for the winners of the 2024 Nobel Prize in Economics			
	Daron Acemoglu	Simon Johnson	James Robinson
Publications	291	77	112
References	63,596	25,932	27,723
H-Index	112	35	50
Note: Data accessed on 21 February 2025. Source: scopus.com			

Judging from their impressive careers and scientific impact, it cannot be disputed that the laureates truly deserved winning the Nobel Prize. Their seminal work has had enormous impact on academia, on wider economic policy and on public discourse (*Table 1*).

# 2. Scientific work

Among the wide-ranging research activities of the three laureates, the Nobel Prize committee highlighted two areas. The first was the empirical evidence for the causal impact of institutions on development, and the second was the drivers of institutional choice and change among political elites. In the following, I briefly describe these two areas.

Before going into the details, however, it is worth touching on what the laureates mean by 'institutions'. While it is difficult to provide a precise definition, Douglas North defined the term in his survey article as follows:

Institutions are the humanly devised constraints that structure political, economic, and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights). [North 1991: 1 (Abstract)]

In their actual research, Acemoglu, Johnson and Robinson use the concept of institutions much more narrowly. In their theoretical work, they focus primarily on the political system, with the redistribution of income (and its limits) by political

elites at the centre of their analysis. In their empirical studies, they use a practical metric of redistribution, which is the probability of unilateral expropriation of private property. Therefore, by 'institutions' they mean the legal security of private property. Additional important issues to consider are the degree of narrowness of this definition and the other elements of a country's institutional system that may be necessary for economic development, such as criminal law and its enforcement. As our aim is to give a brief overview of the work of the laureates, we will not go into this broader context.<sup>7</sup>

As discussed earlier, perhaps the most fundamental question in economics is economic development. The most influential work of Adam Smith, considered the founder of this branch of science, also addressed this issue (*Smith 2012*). To date, modern research has not been able to provide a clear 'recipe' for what makes a country achieve sustained, significant growth over decades.<sup>8</sup>

A useful framework for the neoclassical approach is growth and development accounting (*Solow 1957; Caselli 2005*). The latter may be used to decompose differences in development into contributions of factors of production (capital, labour) and productivity as a residual. There is a strong consensus in the literature (*Caselli 2005*) that large and persistent long-run differences in development are explained primarily by the efficiency of the factors of production, rather than their quantity.

However, this result raises a couple of fundamental questions. On the one hand, the exogeneity of productivity assumed by the neoclassical approach is highly questionable.<sup>9</sup> Technological progress is, at least to a large extent, the result of conscious research and development (*Romer 1990*). Moreover, in most countries, technological progress is mainly about adaptation. Why do many countries in the world use outdated, inefficient production methods when much better options are available? The second issue is that the quantity of factors of production is also endogenous and depends on the level of productivity. Therefore, the causes of underdevelopment must lie deeper than those suggested by a simple decomposition.

Economic (and social) development should be seen as an investment in the future. Such activities include not only investment in fixed capital, but also learning (human capital), sports and lifestyle (health capital), technology and business organisation methods (intangible capital), and the institutional system that supports

<sup>&</sup>lt;sup>7</sup> See the handbook on the relationship between institutions and economic development edited by Baland et *al.* (*Baland et al. 2020*).

<sup>&</sup>lt;sup>8</sup> While this paper only reflects on research outcomes from the post-World War II period, many other important antecedents can be listed in the discussion of economic development.

<sup>&</sup>lt;sup>9</sup> Even with this limitation, the neoclassical model is useful for the study of growth. It still provides a reliable methodology for the empirical study of convergence, for example, and was an important step towards later models that treat productivity in an endogenous way.

the functioning of the market economy. Economic agents, such as companies, households and even the state, invest in the future if the expected return exceeds the costs of the investment. As the latter typically occur early and the former much later in time, the perception of the future and its predictability are key to investment decisions in the broad sense. It is also essential that the investor is able to keep the expected return, without fear of expropriation.

To sum up, stable, predictable protection of property rights is a prerequisite for longterm, sustainable development. The work of the laureates has provided empirical evidence for this claim. On the other hand, it has shed light on the conditions in which the political and social environment enabling this is created. Let us start with the first issue, which is the impact of institutions on development.

#### 2.1. The impact of institutions on long-term development

Acemoglu – Johnson – Robinson (2001) sought to answer the question of whether institutions can be shown to have a causal effect on economic development. The fundamental difficulty in exploring such causal relationships is the problem of endogeneity. As discussed in the introduction, there is a strong correlation between the institutions that support a market economy and development. However, it is not obvious that the former is the cause of the latter. The reverse explanation is also possible, i.e. that economic development allows the establishment and adaptation of better institutions.

The experimental methodology available in the natural sciences is not applicable in macroeconomics. First, we cannot experiment with entire economies, for both practical and moral reasons. On the other hand, even if we are able to perform *one* experiment, we cannot go back in time and perform another intervention from the same starting point. Third, the amount of macroeconomic data (such as countries) is very low. It is almost impossible to find two countries that are sufficiently similar to each other where we might simultaneously implement different economic policy interventions and examine their effects, controlling for everything else.

How can we establish causal relationships in the context of the macroeconomy and, in this case, economic development? The only viable option is to find *natural experiments*. One way to do this is to identify historical episodes where an external, exogenous shock caused parts of an economic unit to evolve in a different direction, temporarily or permanently. Such events are extremely rare and do not, *in themselves*, allow systematic investigation. However, they are extremely useful because they are the closest thing we have to an ideal controlled experiment.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> In the context of natural experiments, it is worth mentioning the work of 2021 award winners David Card, Joshua Angrist and Guido Imbens (*Hermann et al. 2022*).



Source: Maddison database

*Figure 2* shows the different economic development of the two Koreas (North and South) since the early 20th century. Until the end of World War II, the Korean peninsula was unified both economically and socio-culturally, and its history after that point can be regarded as a natural experiment. The partition along the lines of great power interests was an exogenous event. In its wake, a dictatorship and planned economy were established in the north under the control of the Soviet Union (and later China), and an autocratic market economy in the south under the control of the US. The difference in performance between the two systems is dramatic, to the benefit of the South Korean market economy. To a somewhat lesser extent, but a similar picture emerges when comparing West and East Germany between 1945 and 1990.

While this example is very convincing, it remains to be seen how well its lessons can be generally applied to other countries. To get a broader picture, it is useful to look at a larger group of countries. An innovative, systematic way of doing this was proposed by *Acemoglu – Johnson – Robinson (2001)*. The authors use the *instrumental variables* method known in econometrics to show that, in the case of former colonies, colonisation was an appropriate exogenous difference that might be used for examining the impact of institutions on development.

The instrumental variables method uses the logic of natural experiments in a regression setting. In this case, we are looking for an exogenous event that influenced the development of institutions in the countries concerned, but did not directly affect economic development. Provided that we can control for all other differences in the regression, we may isolate the causal effect of institutions, using the appropriate instrument. *Figure 3* describes the logic of this method. The dashed line indicates the exclusion restriction, i.e. the assumption that the instrumental variable has no *direct* effect on economic development.



Acemoglu – Johnson – Robinson (2001) examine the current economic development of ex-colonial countries in the light of the institutional system they inherited from the former colonial powers. The mortality of European settlers is used as an instrumental variable, using the following argument. During colonialism, the European conquerors introduced new institutions to serve their own interests. If colonialism was followed by significant immigration from the mother country, the settlers established institutions they brought with them, which were more conducive to a market economy. However, if settlement was not attractive due to high mortality (mainly from unknown tropical diseases), the European population was limited to those required for administration. In this case, the main objective was the exploitation of colonial resources, for which the institutions were set up to facilitate this ('extracting'). In other words, *Acemoglu – Johnson – Robinson* (2001) argue that the local epidemic situation experienced by the colonisers had a decisive influence on the development of institutions.

In order to turn settler mortality into a good instrument, two additional conditions must be met. On the one hand, there must be a meaningful link between the epidemic environment of centuries ago and today's institutions. The authors justify this empirically, explaining that institutions are highly persistent.<sup>11</sup> On the other hand, the instrument cannot have a direct impact on the current level of development. Empirically, this exclusion criterion can neither be proven, nor disproven. *Acemoglu – Johnson – Robinson (2001)* argue, however, that – partly because of advances in medicine and hygiene, and partly because of the stronger immunity of the original population – it is highly unlikely that the epidemic situation during the colonial era might have a significant impact on the current state of development.

To put the identification strategy into practice, *Acemoglu – Johnson – Robinson* (2001) collected data on settler mortality using historical sources. Today's institutions are measured by the probability of expropriation, i.e. the strength of property rights. The target variable is GDP per capita at purchasing power parity. The influencing factors include a number of indicators used in the literature, such as distance from the equator, the continent of the colonised country (mainly Africa), or the type of legal system (Anglo-Saxon or French).

The results provide clear and robust evidence that stronger property rights lead to higher economic development. The impact of institutions, i.e. the estimated coefficient, is significant. According to the authors' calculations,<sup>12</sup> if we compare the two former colonies of Nigeria and Chile as an example, the difference in institutions implies a 700-per cent difference in development. Although the authors suggest that this may be the upper bound on the actual effect due to measurement errors, the order of magnitude is meaningful and plausible. Interestingly, the results hold even if we exclude from the sample the most obvious settler colonies, where the original population has been almost completely replaced.<sup>13</sup> It should also be noted that the estimate can explain lower levels of development in some countries even when the authors control for different continents. Their findings suggest that underdevelopment in Africa, for example, is caused by poor institutions, and not by some sort of 'African curse'.

<sup>&</sup>lt;sup>11</sup> Evidently, the study of the long-lasting impact of institutions is not limited to the laureates in the literature; see for example *Dell* (2010); *Guiso et al.* (2016); or *Juhász* (2018).

<sup>&</sup>lt;sup>12</sup> Acemoglu – Johnson – Robinson (2001): 1387.

<sup>&</sup>lt;sup>13</sup> USA, Canada, Australia and New Zealand.

Acemoglu – Johnson – Robinson (2002) provide further evidence on the importance of institutions. In their view, the number of European settlers in the colonial population was a key factor in the choice of institutions. This was determined not only by the presence of diseases that were fatal to Europeans, but presumably by other factors as well. Such a factor may have been the population density at the time of colonisation, where settlement was motivated by the availability of 'empty' land.

If European settlement at the time of colonisation was hindered or made more difficult by the higher population densities already present, Acemoglu, Johnson and Robinson argue that a *'reversal of fortune'* should be observed in the data. Previously less populated areas were more likely to have better institutions introduced, leading to stronger subsequent economic development. In other words, areas (colonies) with previously higher population density must now be less developed.



Note: The countries considered are those that Acemoglu – Johnson – Robinson (2002) classified as colonies.

Source: The author's own calculations based on original data provided by Acemoglu – Johnson – Robinson (2002) (https://economics.mit.edu/people/faculty/daron-acemoglu/data-archive)

The main results of *Acemoglu – Johnson – Robinson (2002)* are illustrated in *Figure* 4, based on original data shared by the authors. The figure shows a strong negative relationship between the pre-colonial population (measured in 1500) and the level of development in 1995. In other words, fortunes can really be reversed – earlier success (measured in terms of population density) was followed by relative decline during and after colonialism.

## 2.1.1. Criticism

Although the results of the two articles are convincing, the analyses have been the subject of important criticism from several quarters. *Albouy* (2012) criticises the instrumental variable, i.e. the creation of settler mortality rate as used by *Acemoglu* – *Johnson* – *Robinson* (2001). Since the historical data are rather incomplete and imprecise, the original results are not necessarily robust enough for critical reconsideration of the instrument. However, in their response, *Acemoglu* – *Johnson* – *Robinson* (2012) are of the opinion that *Albouy's* (2012) procedure, which excludes observations that are considered less accurate in most of the countries at issue, is excessive. In their interpretation, the original results remain robust if the quality of the settler mortality data is evaluated in the real historical context.

Another substantive criticism questions the interpretation of the results and not their robustness. *Acemoglu – Johnson – Robinson (2001)* and (*2002*) hypothesise that colonies where Europeans were able to settle developed more strongly. They attribute this effect to the established institutions. *Glaeser et al. (2004)* identify an alternative mechanism based on the human capital of settlers. They draw attention to several problems (e.g. the choice of variables to measure the institutional system), but perhaps their most important insight is the relationship between human capital and institutions. While institutions are external constraints for economic actors, human capital – by definition – is embodied in the decision-makers. Therefore, not only did the European settlers take with them the institutions that embodied the rules of the game, they also brought along the human capital intrinsic in themselves. It is conceivable that the results found by *Acemoglu – Johnson – Robinson (2001)* and (*2002*) are due to the latter, i.e. human capital. In this view, better institutions were not necessarily a cause of economic development, but probably a consequence of it.

Acemoglu – Johnson – Robinson (2014) attempted to respond to this criticism. First, they document that the Europeans who moved to the exploited colonies were generally better educated (albeit in much smaller numbers) than those who moved to the settler colonies. Second, when both institutions and human capital are considered as explanatory variables in the empirical analysis, the role of institutions is much stronger. Thirdly, very similar results are obtained when using regional data as well as national data. The use of regional data allows controlling for several factors (through country-fixed effects) that make comparisons between countries difficult.

To summarise, while the research of the laureates on the causal relationship between institutions and economic development is convincing, certain details are still disputed. The protection of private property, as a central institution of market economy, was likely to play an important role in later economic development. Looking back at *Figure 1*, we can see that no meaningful economic development is possible without the rule of law. However, other factors are also necessary for growth, as there are many countries in the figure where, despite the rule of law, there is no developed economy.

However pioneering the empirical strategy of the laureates, the mutual endogeneity of macroeconomic variables and the persistence of processes make it extremely difficult to separate alternative explanations. The work of Acemoglu, Johnson and Robinson is important not only for their actual results, but also for their seminal methodology and original questions.

#### 2.2. Choosing the institutions

The second major research programme included in the justification for the Nobel Prize was carried out by Acemoglu and Robinson and examined the issues of the selection of institutions and their development over time. Although institutions are empirically very persistent, they are not immutable on a historical scale. In a number of studies and in their famous book mentioned above, Acemoglu and Robinson explore the circumstances under which ruling elites choose institutions that are either beneficial or harmful to economic development.

It is worth noting that the research programme is not about the general institutional system, mainly because it is extremely difficult to define. As in the previous chapter, they are mainly concerned about the security of property rights. This is defined as protection from unilateral redistribution by the elite. The details of the different studies differ, but the main conflict is between the elite in power and the rest of society ('the common people'). The elite design and operate political institutions in such a way as to maximise the income they can expect, both from their own resources and through redistribution. However, they cannot achieve this goal without constraints, and are faced with various trade-offs.

One important trade-off – crucial in development economics – is the conversion between current and future income. Investment in the broad sense is the source of economic growth. This means that an investor gives up current consumption in order to obtain higher income and consumption in the future. In this context, the elite's choice is between a larger share of the existing total income in the short term ('a bigger slice of a smaller pie') or a smaller share in order to generate higher total income in the medium and long term ('a smaller slice of a bigger pie'). Institutions that foster growth are created when the latter strategy is more profitable for the elite.

Another factor limiting elite behaviour is the potential resistance of society. Although the institutions are shaped by the elite, it is possible for the common people to replace the elite (through 'revolution'). Like all conflicts, revolution leads to short-term losses for society as a whole. However, if the degree of redistribution between the elite and the common people can be sufficiently altered in favour of the latter, it may be in the interests of the latter to start a revolution. To prevent this, it is preferable for the elite to redistribute only to the extent that the loss to the common people from the revolution's outbreak is greater than the gain to the common people from the changed institutions.

One final, important aspect of dynamic relationships is the issue of *commitment*. A different equilibrium can be achieved if the actors – the elite or the common people – can make enforceable promises about their future behaviour. The commitment problem is also prominent in the operation of monetary policy (*Kydland and Prescott 1977*). As we will see, it also plays a major role in the survival of institutions.

It is obvious that, contrary to the description above, neither the elite nor the rest of the common people are unitary actors. However, simplification is an essential part of the economic approach. Therefore, I will continue to use this binary split to present the work of the Noble prize winners. Evidently, a more detailed division is possible (see briefly below), but assuming only two social groups is enough to understand the main takeaways.

To model the questions asked, Acemoglu and Robinson use game theory tools. Games that assume a dynamic, infinite time horizon may rationalise an extremely wide spectrum of social phenomena as equilibrium behaviour. According to the 'Folk Theorem' (*Friedman 1971*), the set of equilibrium outcomes is typically too large. For the literature, the challenge is rather to answer how to select the most empirically relevant solutions among the possible equilibria. For example, the study by *Acemoglu and Robinson (2000a*) uses the concept of Markov perfect equilibrium

for this purpose. For the sake of clarity, I will therefore not present the full model assuming an infinite time horizon, but a more tractable static version with an unambiguous equilibrium behaviour. The presentation of the simplified model draws on the *Nobel* (2024) paper, but omits the mathematical details.<sup>14</sup>

The model explains how a country chooses and maintains its institutions. The population consists of two main groups: the smaller *elite* and the larger *common people*. Initially, political power is in the hands of the former, but the common people have the power to change this situation (democratisation). Since the common people have larger numbers, in a democratic transition, institutions are shaped by their preferences (*median voter*).

The economic system consists of two productive sectors – the formal and the informal sectors. The former has higher productivity, but is easier for the state (the elite) to control. In the informal sector, productivity is lower, but the income generated is more difficult to expropriate by the elite.<sup>15</sup> As *Figure 5* shows, the informal economy plays a significant role in most countries. However, we also see a strong negative relationship between economic development and the share of the grey economy. Acemoglu and Robinson's research programme interprets this phenomenon as a rational outcome of the interaction between institutions and economic agents.

In the initial situation, the elite have the possibility to extract resources from the public through taxation. Since the elite do not pay taxes, they operate entirely in the formal economy. All income earned by the public in the formal sector is taxable. In the informal sector, however, part of the income may be hidden from taxation. That is, the public chooses between the more productive but more heavily taxed formal sector and the less productive but less taxed informal sector.

If the common people cannot accept the framework set by the elite, they have the potential to start a revolution. In the *Acemoglu and Robinson (2000a)* model, the probability of success is one, but political crisis leads to lower output (income) in both sectors. After a successful revolution, the elite loses power and, as described above, loses control over redistribution. For the sake of simplicity, we assume that the common people will still not have access to the income of the former elite, meaning that there will be no complete role reversal between the two social groups.

<sup>&</sup>lt;sup>14</sup> For those interested in further reading, we recommend the detailed analysis in *Nobel* (2024), pp. 23–28.

<sup>&</sup>lt;sup>15</sup> See, for example La Porta and Shleifer (2008) or Medina and Schneider (2018).





The timing of the model is as follows. The first step is for the elite to decide whether or not to introduce democracy. In the second step, the common people decide whether or not to start a revolution. In the third step, the members of the two groups choose which sector they will work in. Finally, the group in power sets the tax rates.<sup>16</sup> Since the model is static, or consists of finite steps, it can be easily solved by the well-known *backward* induction method of game theory. In other words, we first determine the tax rate as a function of the power relations, then we derive the distribution between sectors taking this into account, and finally we derive the political choices of the elite and the common people as a function of the expected payoffs.

It is easy to see that, in the last step, the elite – should they stay in power – is going to opt for maximum tax rate, i.e. total expropriation. Rationally anticipating this,

<sup>&</sup>lt;sup>16</sup> Anticipating later results, *Nobel* (2024) also allows for unilateral transfers between the two groups beyond the tax system. For the sake of simplicity, we are going to disregard these transfers.

the common people will be active only in the informal sector, thus minimising the expected reduction of income. The elite will stay in the formal sector, as they do not pay taxes. In a democratic transition, however, the median voter, i.e. the common people, will prefer the minimum (zero) tax rate, which will attract everyone into the formal sector.

For the common people, democratisation is clearly a better long-term outcome. Social welfare is also higher because everyone is in the more productive formal sector. At the same time, a violent takeover (revolution) has transition costs. The public will choose revolution if the long-term benefits outweigh the short-term costs. Formally, the 'revolutionary condition' can be quantified with the following formula:

$$\mu > \frac{1-\theta}{A/B},\tag{1}$$

where  $1 - \mu$  is the GDP loss due to the revolution,  $1 - \theta$  is the potential tax evasion rate in the informal sector, and A/B is the productivity advantage of the formal sector over the informal sector. The probability of revolution is higher, if (i) the revolution is expected to be less 'bloody'; (ii) the informal sector is inefficient; and (iii) the elite is able to extract substantial 'grey' income.

The final step is to analyse the elite's decision to democratise. If condition (1) is not met, there will be no revolution. In this case, the elites are clearly better off without ushering in democratisation. But if revolution is inevitable, it can be shown that the elites are better off preventing it by democratisation. In other words, condition (1) also determines the occurrence of the democratic transition.

An important assumption in the above derivation was that the elite cannot credibly commit to a sufficiently low tax rate because their interest is maximum expropriation at the last step (*dynamic inconsistency*). To what extent does it change the outcome if there is a 'commitment technology' that obliges the elite to keep their prior promises? It is obvious that, in this case, the elite never democratises, because it can 'buy' social peace. It can also be shown that, in this case, the social optimum may be achieved without revolutionary loss, when everyone is in the formal sector. Finally, it can be shown that both the elite and the common people are better off than in a situation with no commitment.

Although democratisation may be prevented if there is credible commitment, Acemoglu and Robinson argue that such commitment is unlikely in the exercise of political power (see also *Acemoglu, Johnson and Robinson 2004*). The reason is that, in the case of political conflict, there is no external actor or technology that can enforce compliance with the prior agreement at the expense of the incumbents. An interesting question is whether an external actor such as the European Union can play this kind of role for the Member States. In summary, the simple model can explain many interesting phenomena. First, it shows why and under what conditions an inefficient, autocratic economic system may survive. The main reason for this is the lack of commitment, which prevents the elite from compromising with the public in order to retain power. The model also explains the circumstances under which democratisation can occur. This might be, for example, technological progress that raises the relative productivity of the formal sector. Finally, it explains why democracy is not a necessary condition for economic development. If the elite can enter into a 'social contract' with the common people where a sufficient degree of self-restraint is credible, economic efficiency can be achieved in an autocratic system.

The empirical relationship between democracy and economic development is illustrated in *Figure 6*. As usual, the measure of development is GDP per capita at purchasing power parity. As an indicator of the democratic system, I used the 2022 V-Dem 'Liberal Democracy' index (*Pemstein et al. 2024*). It goes without saying that the figure is for illustrative purposes only and does not represent a causal relationship in any direction.



The figure shows that the empirical link between democracy and economic development is weak. This is particularly true for middle-income countries, where there are examples for both strong democracies (Costa Rica) and autocracies (Thailand). However, it is interesting to observe the economically developed nations. Among these, the traditionally prosperous, early industrialised countries are all strong democracies. Countries that have high GDP per capita but are not democracies are almost exclusively represented by the monarchies of the Persian Gulf, rich in oil and gas. According to Acemoglu and Robinson, in these economies, the autocratic political system works because the surplus resources held by the elites allow for redistribution to a degree that is acceptable to the common people. An interesting exception is the case of Singapore, which does not have this type of natural wealth, but has managed to create a 'social contract' between the elite and the common people anyway. We cannot discuss the reasons for this, but in any case, the figure shows that the Singapore example is typically not easy to replicate.

#### 2.2.1. Extensions

Many extensions and modifications of the basic model described above have been made by the award winners, both in their joint work and those with additional coauthors. *Acemoglu (2003)* examines why socially inefficient outcomes can persist. The study confirms that commitment is key to understanding this. *Acemoglu – Johnson – Robinson (2005)* synthesise the two research projects that led to the Nobel Prize and provide a number of empirical examples. These include the role of the English Glorious Revolution in bringing about the Industrial Revolution, the different socio-economic development of the two Koreas after World War II, or the differences in colonialism between the 'settler' and 'non-settler' colonies, which have already been discussed in detail. *Acemoglu (2006)* assumes three groups instead of the two used in the baseline model, and can thus also investigate the way redistribution through factor prices is achieved. *Acemoglu* and *Robinson (200b)* and (*2006*) argue that the interest groups that successfully block technological progress are not economic losers (e.g. the machine breaking Luddites), but political losers.

Another interesting direction is the possibility of political instability. In the basic model described, democratisation is a one-way process. In reality, however, there are countless examples where the process can be reversed (see, for example, the countries of Latin America). *Acemoglu and Robinson* (2001) analyse the likelihood of this and identify the conditions leading to political instability. *Acemoglu and Robinson* (2008) examine a similar mechanism whereby former elites 'occupy' and empty democratic institutions and make them work in their own interests.

It is worth briefly mentioning the award-winning bestseller authored by the two laureates, 'Why Nations Fail' (*Acemoglu and Robinson 2012*). The book synthesises

Acemoglu and Robinson's research programme and makes it available to a wider audience. The key message is that the main determinants of economic development are not geographical or cultural factors, but rather socio-political institutions. In addition to the theoretical considerations outlined above, the book provides numerous case studies and historical examples to support the main arguments.

Empirical studies related to theoretical models examine testable claims. As mentioned above, in several of their works, the laureates cite historical examples to illustrate and prove the existence of the mechanisms. Among many others, *Acemoglu and Robinson (2012)* discuss in detail the problems of Mayan civilisation, the socio-economic system of Sierra Leone during and after colonisation, the development of the Australian institutional system and the impact of the Napoleonic Wars on the development of Western European countries.

Acemoglu et al. (2019) analyse the causal effect of democracy on economic development. Their results show that democratisation increases GDP per capita by 20 per cent in the long term. Note that, while this is not an insignificant order of magnitude, it is dwarfed by the cumulative long-term growth of up to 1,000 per cent in successful countries. This also confirms the theoretical result that democracy is one way of economic development, but not necessarily the only one. In addition, the effect is delayed over time, taking about 20 years, according to the authors' results.

# 3. Summary and impact

Acemoglu, Johnson and Robinson, winners of the 2024 Nobel Prize in Economics, have pioneered a new way of examining the role of key institutions in economic development, notably the protection of property rights. It has been conclusively demonstrated that good institutions are causally linked to subsequent growth. They have also made a very important contribution in explaining the choice of institutions and the role of elites in the survival, or rather the change of bad institutions.

Their findings have been validated and developed not only by their own research, but also by the vast literature that their work has inspired. We do not have the space to list these works in detail; instead, we recommend the reader to consult the detailed English summary of the prize (*Nobel 2024*). In it, the authors list a number of important additional examples for both the historical application of natural experiments and instrumental variables in economic history and for the theoretical and empirical study of the relationship between political institutions and economic development.

To conclude, here is a somewhat subjective view put forward by the author of this paper. The highly complex nature of economic phenomena has pushed economic

methodology towards strong simplification and towards studying different phenomena in isolation from each other. In many cases, this strategy has been effective and has led to key scientific contributions. At the same time, analysing different social systems in isolation from each other inevitably leads to a certain degree of neglect of their interactions.

It is a great achievement of Acemoglu, Johnson and Robinson to have brought the 'political' element, which had been very much emphasised in early economics, into focus. In particular, the main issues of economic development and, more broadly, macroeconomics are difficult to understand without the broader socio-political context. To avoid repeated bad economic policy decisions in the future, we also need to understand the political motivations behind them. This is what the 2024 laureates have provided guidance and scientific tools for, undoubtedly deserving of the Nobel Prize in Economics.

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