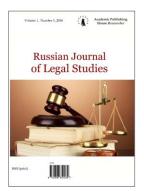
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The Nature of the Firm Revisited

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Abstract

Ronald Coase, who lived from 1910 to 2013, was an outstanding British economist and writer, professor at excellent American universities and a longtime editor of the Journal of Law and Economics in its heyday. To this day, Ronald Coase remains one of the most cited economists in history. Ronald Coase's observations about the nature of firms as economic entities should be treated with due admiration – especially considering that his reasoning was based on an economy known at the beginning of the 20th century. Due to his groundbreaking insights into the dynamics of business formation and the role of transaction costs in microeconomics, he received the 1991 Nobel Prize in Economics. Ronald Coase is considered the father of law and economics, the most famous economist among lawyers and the most famous lawyer among economists. The aim of the article is to present Ronald Coas' thoughts contained in his first famous work titled The Nature of The Firm in the contemporary economical context. The author presents Coase's profile and subjects his work to a critical analysis. Moreover, the aim of the article is to look at the theses contained in the Coase's work from the point of view of the 21st century modern economy. The article is based mostly on academic literature.

Keywords: Ronald Coase, transaction costs, the firm.

1. Introduction

Ronald Coase, who lived from 1910 to 2013, was an outstanding British economist and writer, professor at excellent American universities (University at Buffalo, University of Virginia, University of Chicago) and a longtime editor of the Journal of Law and Economics in its heyday (Formaini, Siems, 2003: 1; Cheung, 1987). To this day, Ronald Coase remains one of the most cited economists in history (Schwab, 1993: 359). Due to his groundbreaking insights into the dynamics of business formation and the role of transaction costs in microeconomics, he received the 1991 Nobel Prize in Economics. It is worth noting that Ronald Coase is considered to be one of the fathers of law and economics (Henderson, 2013), as well as the doyen of the New Institutional Economics and Modern Organizational Theory (Downes, 2013). Many outstanding scientists, including Nobel Prize winners, were associated with the resulting Society for Institutional and Organizational Economics. Among them were Douglass North, Elinor Ostrom and Oliver Williamson (Williamson, 1991), considered the most important heir to Coase's thought. Coase's most important publications include: The Nature of the Firm (Coase, 1937), The Federal Communications Commission (Coase, 1959), The Problem of Social Cost (Coase, 1960) as well as The Lighthouse in Economics (Coase, 1974). Especially The Nature of the Firm and The Problem of Social Cost brought him fame and recognition from the world of science. Those two most cited

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(and often criticized) economic works of the 20th century are considered to be the two pillars on which virtually all of Coase's thought rests. The most important achievements of Coase, making a huge contribution to the development of economic thought of the 20th century, are the research on the phenomenon of transaction costs, the famous *Coase theorem* (Allen, 2015: 379-390), and the so-called *Coase conjecture*.

It is worth noting that there are some interesting features that distinguish Coase from the whole pantheon of 20th-century economists. First of all, Coase postulated the study of real market phenomena, unlike most economists, whom he accused of dealing only with the so-called "blackboard economics", i.e. a theoretical economy completely detached and disconnected from economic reality (Henderson, 2013). Second, Coase produced only a dozen works, and most of them did not use mathematics or used it to a very limited extent. In his works, he has employed simple, concise language, and he was awarded the Nobel Prize practically because of just two relatively short publications (The Nature of The Firm, The Problem of Social Cost), the first of which was written shortly after his graduation from University. Third, Coase was a kind of outsider because he was not an economist by training, but merely a lawyer. Fourth, Coase, despite the overwhelming influence of various political and economic doctrines, created his own original current, followed by many to this day (Cassidy, 2014). Initially, he considered himself a socialist, and with time he discovered the soul of a free marketer, and even became (not fully rightly) a patron of economical laissez-faire thought (Bylund, 2014: 30). Finally, Coase is an author so interesting and ambiguous that his views have sometimes been distorted and misinterpreted for particular interests or the political and economic agenda on both sides of the scientific and political spectrum (Schwab, 1993: 360). An excellent example of this phenomenon can be found in The Problem of Social Cost, which is considered by the left to be a pro-interventionist argument, and at the same time anti-interventionist by the right. Despite his precise and matter-of-fact arguments, as well as a concise style, Coase is by no means an easy-to-read author. Rather, on the contrary, there is a depth of reasoning behind seemingly short texts, which has led many – usually contradictory interpretations to arise around them (Cassidy, 2014). This is largely due to the different ways in which his works were perceived by numerous commentators, as well as his general lack of inclination to make strong economic judgments.

In addition to The Nature of the Firm, which is the subject of this analysis, the turning point in Coase's career was the publication of the *The Federal Communications Commission*, in which he presented the essence of institutional property rights and their impact on effective capital allocation. This was the basis of the so-called Coase Theorem – the idea according to which, in the absence of transaction costs, clearly defined and enforceable laws (mainly property rights) allow to achieve the most economically effective result, without the need for major subsidiary state intervention. The result of these considerations was the famous meeting Coase had with a dozen of the most influential economists by the time, convened to refute his claims (such as: Rueben Kessel, Milton Friedman, Martin Bailey, Arnold Harberger, Gregg Lewis, John McGee, Lloyd Mints and George Stigler) (Formaini, Siens, 2003: 3). Interestingly, all of Coas's adversaries were convinced during the hours of discussion, which brought him great publicity and secured a job in 1964 at the University of Chicago, whose school of law and economics was the most influential current by the next several dozen years. The immediate consequence of this discussion was the publication by Coas of his most famous article, The Problem of Social Cost, in which he accurately presented the more precise meanders of his reasoning. Using examples from the English common law system, Coase explained why regulatory interventions (top down approaches) most often led to less effective results than if the problem was left to be solved by the parties, i.e. the free market (bottom up approach) (Formaini, Siens, 2003: 3). This approach was in opposition to the then dominant concept of Arthur Pigou, who in his publication The Economics of Welfare (1920) advocated that government regulations lead to the most effective solutions by improving numerous market shortcomings (Formaini, Siens, 2003: 3). These considerations were of particular importance in the context of disputes involving more than one actor – the so-called externalities, such as damage caused by animals, immissions (sound, noise, smell, harmful substances), mining damage, environmental damage, etc (McChesney, 2004). According to Pigou, in these cases the state should restrain, punish or tax the source of the problem. However, according to Coase, with low transaction costs, a more effective solution would be to leave the dispute to stakeholders who, under voluntary contracts, would be able to solve the problem among themselves (the so-called hands off approach). As Coase himself said during the Nobel Prize lecture in 1991, what are traded on the market are not, as is often supposed by economists, physical entities but the rights to perform certain actions and the rights which individuals possess are established by the legal system (Coase, 1991).

Coase's approach was so groundbreaking and convincing that it practically gave rise to a new field (law and economics) and gave Coase enormous popularity among the Chicago school of thought, neoclassical economists and economic libertarians. At the same time, it was used to promote a political agenda limiting the role of the state and interventionism, which met with an exceptional wave of criticism from the socialists and the broadly understood "economic left". To this day, Coase's work evokes great emotions due to the alleged contradictions of his theses. Prima facie, The Nature of the Firm appears to be an economically left-wing position that takes into account the positive aspects of central planning. On the other hand, the Problem of Social Cost is a free market position that undermines the concept of state intervention. Despite their apparent differences, both works have a lot in common – their central element is the concept of transaction costs and their importance for the effective allocation of goods in the economy. When analyzing Coase's works, it is worth remembering that his caution in formulating his judgments turned against him, prompting the political and economic forces on both sides of the ideological spectrum to understand his works abnormally (Schwab, 1993: 369). Indeed, Coase's careful observation of the activities of state bodies allowed him to conclude that almost never a solution imposed by public authorities would be effective in practice (Henderson, 2013). At the same time, however, it did not rule out that in certain situations it would be possible or even advisable (Bylund, 2014: 30). Coase argued that each individual case should be analyzed separately and with appropriate caution. Moreover, it should be noted that the famous *Coase Theorem* is more of a logical concept and refers to an abstract situation in which transaction costs are zero or negligible - a situation that almost never occurs in practice (Henderson, 2013).

2. Materials and methods

Despite his simple language, Ronald Coase is considered one of the most interesting and sophisticated authors of law and economics. To date, two of his works: *The Nature of the Firm* and *The Problem of Social Cost* are considered the most cited legal works in history.

At the same Coase is an author so interesting and ambiguous that his views have sometimes been distorted and misinterpreted for particular interests or the political and economic agenda on both sides of the scientific and political spectrum. This is despite the fact that numerous materials and data on this subject are readily available on the Internet, the vast majority of them in English. As a result, many secondary publications do not fully reflect his views and are subject to authors' own prejudices.

This article is based mostly on scrutinizing the original works of Ronald Coase, academic literature, reports and data published by competent market actors. Legal scientific research methods applied by the author include: the historical method, comparative research, critical analysis, and to some extent – law and economics.

3. Discussion

At the time of writing of *The Nature of the Firm*, Coase was just under 25 years old. This article was written during the *Great Depression* (1921–1933), which saw one of the greatest economic debates of all time regarding the effectiveness of the concept of central planning, known primarily as the *Socialist Calculation Debate* (Schwab, 1993: 362; Bylund, 2014: 2). The fruits of this discussion significantly influenced the scientific development and reasoning of young Ronald Coase. The crucial element of the Debate were the publications of Ludwig von Mises ("*Die Wirtschaftsrechnung im sozialistischen Gemeinwesen*" (1920) and *Die Gemeinwirtschaft* (1922)), in which he argued that without private means of production there is no competition, and consequently – the ability to determine the price and value of individual goods (Bylund, 2014: 2). As a result, socialism excludes the calculation of gains and losses from the economy, leading to its profound ineffectiveness. Contrary to the above, authors with socialist inclinations (including Fred Taylor, Enrico Barone, and Oskar Lange) argued that the state, like a central counterparty, using accounting-like methods, can still regulate prices on the basis of over-demand or oversupply.

Coase faced those controversies while studying at the London School of Economics (hereinafter – LSE). LSE, founded in 1895 by socialist thinkers (Sidney Webb, Beatrice Webb, George Bernard Shaw), was aimed at creating an intellectual cadre in the field of socialist economics, although it was characterized by considerable freedom of academic discussion and looking at the problems of modern economics from many different perspectives (Bylund, 2014: 4). Interestingly, in the 1930s, the LSE paradoxically became one of the most important centers of modern classical economics, which happened under the influence of thinkers such as Lionel Robbins (a socialist converted under the influence of Mises) (Bylund, 2014: 7), Fridrich von Hayek, John Hicks, Nicholas Kaldor, and Coase's personal mentor, Arnold Plant (also a socialist convert). It was during this period, as a student at the LSE, that Coase had the opportunity to learn about the theories of the Austrian School, the theory of capital, and Mises's arguments against socialism, which then counterbalanced the increasingly popular interventionist policies advocated by John Maynard Keynes.

Ronald Coase himself was only a law student at the time, and it was not until the series of lectures and discussions at the LSE that prompted him to become interested in economics (Bylund, 2014: 10). Initially, despite the great influence of Arnold Plant (in the field of business organization and the invisible hand of the market) and Hayek (in the field of the Austrian capital theory), young Coase saw himself as a socialist who changed his mind only later in life.

It is believed that the direct reason for writing *The Nature of the Firm* were Coase's reflections on the imperfection of the market (and classical economics) as a result of the emergence of high transaction costs. During his stay on a scholarship in the USA (1931–1932) he worked at the University of Chicago with outstanding scientists such as Frank Knight and Jacob Viner. During his stay in the United States, Coase was mainly engaged in researching the vertical and horizontal integration and organization of American super-enterprises (including General Motors). The meeting with the candidate of the socialist party, Thomas Norman for the US president, must also have had a huge impact on the thoughts of young Coase (Bylund, 2014: 11). Throughout his research stay, Coase has been wondering, why the price mechanism in the market ignored the issue of the organization of enterprises and the central relationship between the employer and employee in this respect, which Coase compared to the relationship between master and servant.

Coase was looking for the source of the impossibility (according to the Austrian economy) of organizing Leninist Russia in a similar way to a centrally planned factory, since factories and economic entities of enormous size were emerging on the free market by themselves (Henderson, **2013**). If the free market mechanism operated in accordance with the classical theory, there would be no need to create firms and produce goods, according to Coase, because all these goods (or their substitutes) would be readily available on the market at a price regulated by the law of supply and demand. Since they did in fact arise, it seemed the usual market exchange combined with the invisible hand of the free market in the form of a price mechanism could not have been functioning properly for some reason (Bylund, 2014: 26). Ronald Coase identified the high transaction costs of market operations as the major cause of these imperfections.

Interestingly Coase did not problematize the assumption of the bottom-up price mechanism and the top-down planning entrepreneur. By doing so Coase did not consider specialization or the division of labor as a sufficient explanation of integration in firms. *He viewed firms as hierarchical, planned structures akin to socialist economic planning – essentially a "mirror image" of the market's efficient allocation of resources* (Bylund, 2014: 22).

In the essay the *Nature of the Firm*, Ronald Coase identifies the following issues related to the formation, existence and further expansion of companies.

1. First, Ronald Coase points out that since, according to the traditional theory of economics of Adam Smith, the free market is efficient (it provides the best goods and services at the lowest price), it should always be cheaper to buy a given product or service on an exchange market (outsource outside) than to hire workers to create the good. Following this line of reasoning, "outside the firm, price movements direct production, which is coordinated by a series of exchange transactions in the marketplace. Within a firm, these market transactions are eliminated, and in place of the complicated market structure with exchange transactions is substituted the entrepreneur–co-ordinator, who directs production. It is clear that these are alternative methods of co-ordinating production. Yet, having regard to the fact that if production is regulated by price movements, production could be carried on without any organization at all,

well might we ask, Why is there any organization?" (Formaini, Siems, 2003: 2). Since production is regulated by prices, Coase asks the question of the meaning and reasons for the existence (and moreover, the emergence of new and more) organizations (companies), instead of basing everything on a system of independent, self-employed people who would contract with each other on the free market.

2. Then Coase wonders why the coordination is the work of the pricing mechanism in one case and the enterprise in another. According to the author, *the purpose of these considerations is to bridge the gap between the assumption (made for some purposes) that resources are allocated by means of the price mechanism and the assumption (made for other purposes) that this allocation is dependent on the entrepreneur–co-ordinator* (Coase, 1937: 33). Therefore, Coase explores the practical determinants of choosing one of these paths for capital allocation.

3. Coase then concludes that there must be a significant cost of using the price mechanism in the free market (and therefore organizing production in such way) (Coase, 1937: 35). The author distinguishes here primarily the cost of finding out what prices are appropriate, as well as the costs of negotiating and concluding a contract each time on the exchange market. While agreeing that these costs cannot be completely eliminated also in the case of organizing production under the aegis of an enterprise (company), he is of the opinion that these costs are significantly lower (one employment contract, one negotiation of a labor contract, etcetera). Coase points out that the employment contract does not contain all the obligations of the employee and the entrepreneur's prerogatives, but it establishes a general relationship of subordination and control, i.e. the performance of official orders by the employee on the basis of the boss's coordination decisions. In other words, the contract only generally defines the framework of the employer's authority in return for the employee's remuneration.

4. Coase also notes that there are other downsides to using the pricing mechanism (Coase, 1937: 36). Especially in the case of longer-term contracts, dealing more with services than goods, it may turn out that concluding one long-term contract is more convenient and less economically risky. At the same time, specifying the detailed provisions of the contract may be impossible or significantly difficult – as a result, it may be more effective to replace the contract of equal parties with an employment contract within the company.

5. Coase summarizes the above arguments by stating that depending solely on the market costs money, and by establishing an organization or firm and entrusting the entrepreneur's managerial power over the means of production, certain costs are saved (Coase, 1937: 37). The entrepreneur needs to try to perform his managerial duties at a lower cost than on the free market, or alternatively, return to it.

6. By the way, Coase wonders if there are other factors that may be influencing the phenomenon of business start-up, such as market uncertainty, or the legal system (for example, tax-favoring intra-company trading vis-à-vis trade between different entities). Coming to the conclusion that these factors may affect the size or number of companies, however, they are not considered the main determinants of the phenomenon of their formation (Coase, 1937: 38).

7. Then Coase goes on to the following problem – is it possible to examine the factors and forces that determine the size of companies? (Coase, 1937: 38) He indicates, inter alia, the Knight's reflection on the subject, arguing that the incentive for a company to become a monopoly must be counterbalanced by a powerful force that degrades productivity as the company grows. Coase poses a tough question: why do market transactions take place at all, if everything could just function within one company, resembling the mythological Leviathan? The author indicates the probable causes, i.e. decreasing management revenues or the increasing price of the supply of production factors, deriving 3 basic factors on which the companies' growth tendency depends (Coase, 1937: 39):

a) the lower the organizational costs and the slower they grow with the increase in the conducted transactions

b) the lower the chance of the entrepreneur's mistakes and the slower the chance will grow with the company's growth

c) the more the price of supply of factors of production decreases (or grows less) with the growth of the firm.

8. Accordingly, Coase notes that the organizational costs and losses due to occurring errors increase with the spatial growth of the company, the variety of transactions, and the likelihood of price movements. As a result, at some point, efficiency will decline as your business grows. Coase

also noticed that various inventions (e.g. communication) reduce spatial dispersion and organizational costs, which leads to the expansion of companies.

9. Further on, Coase deals with alternative approaches to the problem at hand (Coase, 1937: 39). He unequivocally rejects the view that the company was the result of the growing complexity of the division of labor, recognizing that this complexity is already reflected in the market mechanism. In addition, Coase also analyzes Frank Knight's reflections on the role of uncertainty in the market (Knight, 1921).

According to Knight, it is the uncertainty that causes the production of goods to be made on the basis of predictions by the entrepreneur, and also requires supervision, technical management and specialization in decision-making (understood most clearly as a function and responsibility). The result is, according to Knight, a class that focuses on predicting needs based on its expertise, while guaranteeing wages for employees. Coase rejects this theory, arguing that the price mechanism may well be about knowledge and specialization in terms of production needs and does not require these people to actively participate in the production process. It is also worth noting that in the realities of today's economy, outsourcing this type of service is not unusual. The market has even developed a number of entities offering specialized services in the field of market research and its needs in relation to a given segment of goods or services. Moreover, the integrity of such an analysis will usually be more cross-sectional and precise, and at the same time free from prejudices that might be guided by corporate insiders.

4. Results

Coase himself lamented that *The Firm* was often cited and little used in practice (Coase, 1972). Nevertheless, many commentators (e.g. Benjamin Klein) recognized that the subsequent publication of *The Problem of Social Cost* is in fact merely a repetition of the most important thoughts from *The Firm*, and the common denominator of both publications lies precisely in the fact that they place particular emphasis on transaction costs, which was the missing link in the economic models of that time.

The above considerations made by Coase significantly influenced the contemporary perception of the company and work organization, as well as the essence of transaction costs in the price market. As Coase thinks, transaction costs are at the heart of choosing between a pricing mechanism and the centrally managed alternative. Many consider Coase's arguments to this day as a socialist argument for the rationality of central planning – at least in some justified cases. However, it is worthwhile to further analyze this one of the most famous ideas in the history of economics.

Coase, wondering why firms are islands of conscious power in a seas of free market and the pricing mechanism, concluded that the main reason were transaction costs. This is why the pricing mechanism is replaced by an imperative relationship within a company that also carries a certain cost. The size of the company will therefore be determined by the ratio of the cost of using the pricing mechanism and the marginal cost of maintaining this employer-employee relationship. Following this lead, Coase made two main conclusions. First, the company is characterized by hierarchical, not contractual relations. Secondly, decisions in the company are made on the basis of the entrepreneur's power, and not on the basis of the price mechanism.

By embedding Coas's deliberations in his contemporary discourse and historical events (the Great Depression), one can get the impression that *The Firm* fits in with the socialist idea that it is possible to achieve an effective market with the help of central planning, which at the same time would allow for greater social justice. Coase thus rejects Hayek's criticism that central planning is incapable of reproducing market efficiency – on the contrary, even under strictly capitalist conditions, there are planned transactions that, in his opinion, are completely outside the sphere of the price mechanism and the free market.

The argument that the company was characterized by sovereignty detached from the pricing mechanism and consensual contracts was also taken up by the followers of Coase-nobel laureates: Herbert Simon (Simon, 1951: 293-305) and Oliver Williamson (Williamson, Sidney, 1991). Both emphasized the special difference between the free market and the decision-making process in a company characterized by sovereignty, a hierarchical, and even authoritarian relationship. It is this issue that has received considerable criticism.

First, there was criticism of Coase's from relational contract theorists (Schwab, 1993: 364). Criticized was his statement that long-term contracts should ultimately turn into employment in the company. It was pointed out that more and more often there are multi-year agreements between separate entities (letters of agreements, cooperation agreements, investment agreements, consortium agreements), which are based on the principles of good faith or contain adaptation clauses that allow to avoid disputes in the event of major changes in market conditions or structure (especially in the case of supply contracts). As a result, cooperation agreements, consortium agreements, groups of capital companies, or long-term supply agreements between independent companies often replace the concept of vertical integration, so vividly promoted by Coase. It is worth remembering, however, that the significant development of the international contracts law (including adaptation clauses, the concept of hardship, *force mejeure* and *rebus sic stantibus*) took place not until after the war, i.e. long after Coase wrote his article.

Second, Coase has been criticized by corporate theorists (Schwab, 1993: 365) – inter alia: Michael Jensen (Jensen, Meckling, 1976), William Mechling, Armen Alchian, Harold Demsetz (Alchian, Demsetz, 1972), Oliver Hart (Hart, 2009), Ben Klein (Klein, 2006) who see the company as a nexus of contracts (Jensen, Meckling, 1976). They believe that the difference between inside and outside transactions is illusive, and that the company is nothing more than a set of voluntary contracts between independent entities exchanging their work, expertise and services at market exchange prices, and thus driven by means of a price mechanism and free market forces.

According to them, each employee may at any time leave the company or offer their services to another entity on a purely market basis, i.e. consistent with the principles of the pricing mechanism. Corporate theorists criticize a peculiar personification of the company, considering the company to be a purely market concept, devoid of hierarchical power in the sense of Coase. They also point out that all corporate decisions regarding the allocation of means of production, etc., are only a derivative of the price mechanism taking place on the free market, so it is the free market that determines these decisions, and making decisions contrary to market incentives will lead company's collapse.

Again, it is worth noting that the times *The Firm* was written coincide with the greatest crisis in human history, and it was preceded by the days of classic capitalism, where workers' rights were only *in statu nascendi*. All real privileges such as paid leaves, employment tribunals, notice periods, non-discriminatory practices, etc. began to seriously develop only after the war. In Coase's time, the company was not yet like a corporation today, severe disciplinary punishment was applied in some industries, minors were exploited, the workday lasted 14 hours, and the dismissal of any worker was a matter of the employer's discretion alone. The concept of the unemployment benefit was also unknown, or it was not popular at that time. As a result, the vast majority of workers worked under a peculiar imperative, having as an alternative starvation or extreme poverty. Looking at the contemporary Coase company, it is understandable that the then employeremployee relations were much more hierarchical than they are today. As a result, despite the fact that the grounds of Coase's arguments have lost their validity, his criticism in this respect is, in my opinion, unjustified.

Going further, it is also worth considering Coase's text from the point of view of employment in the company in the form of an employment contract. It is undoubtedly a great accomplishment of The Firm that it prompted further research on this subject. Particular attention should be paid to the works of Bengt Holmstrom (Holmstrom, 1989), Paul Milgrom (Milgrom, 1991), John Moore (Moore, Hart, 2009) and Oliver Hart (Hart, Grossman, 1986) who stated that a contract within the company works especially where a balance of many undefined tasks is needed. In such case, the best solution seems to be to pay a predetermined salary, and then leave the discretionary decision in the hands of the employee or manager. Alternatively, too rigid and literal definition of tasks, or linking salary with financial results may lead to short-sightedness or lack of due diligence (e.g. linking remuneration with quarterly results, share price, dividend may result in employees making systemic errors, the consequences of which might be felt by the company only after many years.). In addition, the employment contract will be particularly important whenever the employee gradually acquires experience, knowledge and the so-called soft skills, and its real value will result from his long-term presence in the company and certain relationships with contractors or clients. This will be of particular importance for industries characterized by white-collar work. It is worth giving here the example of a law firm or consulting company – the very creation of a company is not driven by wish to cut transaction costs, but the need to operate under a common name, use of mutual experience and recommendations, as well as use a scattered reputation. Affiliation in a law firm is often an added value, and the work with the same clients alone makes it possible to establish a valuable relationship for the entire cooperative.

Moreover, it is worth considering whether the main determinant for establishing a company are transaction costs. It seems that, especially nowadays, such a statement will be wrong. The production of many complex goods, such as airplanes, smartphones, machines, computers, computer games, requires specialized, disciplined and coordinated work of numerous people, which would not be merely replaced by the price exchange mechanism – primarily because the final result is not only the arithmetic sum of their work, but primarily results from teamwork, which is an added value. For example, when building another iPhone, individual employees do not vet have a specific concept for its creation, but as a result of team work of various departments and brainstorming, the final model is finally reached. This is of particular importance at a time when each subsequent product must be technologically better than its predecessor (e.g. in the case of electronics, smartphones, etc.). In addition, the required time that a well-coordinated and experienced team must spend on trial and error, perfecting the final product should be taken into account. To quote famous US investor Warren Buffett, "No matter how great the talent or efforts, some things just take time. You can't produce a baby in one month by getting nine women pregnant." In my opinion, this argument would also be applied at the beginning of the 20th century, for example in the armaments industry, or in the car industry, so well-known to Coase himself.

By the way, it should be noted that Coase's strict distinction between hierarchical, vertically integrated companies and an exchange market composed of independent entities cannot be defended at present (Economist). In the modern so-called "Gig economy", outsourcing of simple tasks or components / elements plays a key role in production, and the sales model depends on numerous complex sub-dependencies (e.g. company A produces cotton, company B designs a t-shirt, company C sews, company D makes imprint, and company E sells the goods). Moreover, many large companies are de facto complex and interconnected micro-entities (franchises: MCDonalds, KFC) or are based on the web of self-employed workers (UBER, AIRBNB), displaying some sort of collective intelligence (exchange of experiences, work and service algorithms, etc.)

What's more, it is worth remembering in the times when *The Firm* was written, the economy was more dependent on supply than demand as scarce resources were stretched relatively thin on the market. To the much bigger extent than today the prices were determined by a limited supply of raw materials and labor. Predicting the size of production in a situation where the vast majority of produced goods will ultimately find its buyers does not resemble the model of the modern demand economy, in which the main problem is the lack of special interest in the goods produced, and consequently overproduction. The economy of the twenty-first century is based on careful predictions as to the size and types of production, and often production with the intention of only secondary creation of demand. As a result, only big companies are able to invest serious capital and time in potentially risky economic ventures, which individual self-employed workers would not be able to do. The role of the modern company is therefore not only to reduce transaction costs, but above all to anticipate market needs and actively create them, which would not be possible for individuals due to the lack of sufficient influence.

Bearing in mind the above, it should be argued that companies are also created in response to uncertainty and the need to mitigate the market risk, which is closer to Knight's concept than to the Coase's (Knight, 1921). Moreover, it is worth paying attention to the quasi-economic aspects, such as the legal system, which Coase apparently downplayed. Due to the correct recognition of the role played by companies in the modern economy, they can enjoy various tax breaks, grants, subsidies, etc. Moreover, these facilitations function not only on the public law level, but also on the private law level. The concept of the lack of personal responsibility of an entrepreneur in the case of legal persons (e.g. capital companies) is a huge incentive to actively reinvest funds and create jobs. In the hypothetical absence of liability limitation, wealthy people would be afraid to invest funds by setting up firms and companies, because in the event of a failure, any losses would be covered from their personal property. As a result, these funds – instead of circulating through the arteries of economy – would be accumulated and would not stimulate economic growth, innovation, employment, etc. As a result, it may be tempted to say that companies are also created in response to the favorable policy of legal system.

Companies that have been operating for many years also ensure the trust of both consumers and contractors. On the other hand, the legal regime regulating the functioning of corporations is more demanding than in the case of natural persons. Companies are subject to capital requirements, their statutes must meet the requirements set out in laws, and their activities are subject to the supervision and control of various bodies. Such factors greatly contribute to an increase of transactional costs.

Moreover, with regard to the growing number of consumer products, the key success factor is not only functionality or quality, but rather the reputation of a given brand or trademark. In the era of globalization, even one marketing event or a successful advertising campaign can immediately affect the structure of demand for a given product or service. Product campaigns are often attended by well-paid stars of mass culture, athletes, influencers, and the barrier to entry into this "market" is so significant that only large companies can afford it. Taking into account that in the times of social media, fashion becomes global, the possibility of creating consumer behavior by individuals or smaller entities is becoming more and more limited.

It is also worth looking at Coase's reflections on the formation and further expansion of companies and firms from the perspective of time. In the first half of 20th century, production efficiency and reduction of transaction costs were key to market success, and larger entities gained an advantage over smaller ones due to stable long-term business models. The economy of the 21st century looks quite different (Denning, 2013). First of all, market power has been diverted from the producer to the consumer. In addition, goods and products have become more personalized, and their main advantage is a certain added value that distinguishes a given product from many similar products. Internal efficiency has been relegated to the background, and the market is conquered by products not only with the best prices for value, but also those characterized by non-objective criteria such as prestige, inaccessibility, personal bond created by the brand with the consumer, expansive marketing, pro-ecological operation, diversity, egalitarian message , identification with the client, etc.

Moreover, in an increasingly digitized world, thanks to a widespread, highly advanced technology, the size of the company does not necessarily work in its favor. Large enterprises are associated rather with colossi with feet of clay, which, due to their internal inertia (thousands of employees, rented office and utility space, software, rigid business models), more and more often generate relatively modest profits, giving way to a small, resilient and innovative start-ups or flexible companies from the SME sector.

It is worth mentioning here the phenomenon of the so-called unicorns, i.e. private companies worth over a billion dollars, which have never decided to conduct an initial public offering (IPO). In the book *The Elastic Enterprise* (2012) (Shaughnessy, 2012), Nicholas Vitalari and Haydn Shaughnessy described how the traditional management model works to the disadvantage of large economic entities in relation to small resilient firms, especially those managed in a decentralized manner. A good example is also the more and more frequent use of artificial intelligence as part of customer service or distributed ledger technology in management. It is worth paying attention to the prophecy of John Hagel, who believes that the future of the firm belongs to small and organizationally agile companies that, instead of building the scale effect, will focus on distributed, decentralized and dynamic "science" in order to better and faster capture market needs and trends, and also respond to them in a quick manner (Hagel, 2013).

On the other hand, the opposite phenomenon is also noticeable (Hill). Large economic entities continue to grow, and some concerns are turning into monopolistic Behemoths with a market capitalization of hundreds of billions of dollars. Definitely, one of the reasons is that these companies have more and more modern remote management methods and strict employee control, which have allowed them to eliminate numerous intermediate managers and to replace them with more direct control. Thus, by reducing management costs, these companies are able to continue to benefit from scaling and growing. However, it seems controversial whether the further expansion of these companies is definitely associated with lower transaction costs in relation to the market exchange mechanism. It is worth noting that the average return rates of large enterprises have been systematically decreasing. Therefore, it may be tempted to say that in the modern, dynamic and unpredictable economy, large economic entities are not able to actually use the advantage in the form of transaction costs, and the determinants of such a state of affairs are of a more complex nature. So why is this happening?

It looks like the rich get richer (Denning, 2013). Increasingly frequent mergers and acquisitions, as well as public offerings on capital markets, do not always lead to a "real" increase in the value of companies, and their market cap is often not reflected in periodic financial results. Nevertheless, the size of the company in the long run allows it to gain a privileged position in the market, or even a monopoly, and thus effortlessly eliminate smaller rivals from the market. It does not seem like antitrust laws are particularly efficient around the world as they seem to mitigate only tiny fraction of actual problem. In addition, large companies are able to gain access to many sales markets simultaneously, as well as effectively avoid taxation by locating their subsidiaries in tax havens or implementing various international tax schemes. What's more, multinational companies are able to negotiate tax breaks or interest-free loans with governments of individual countries and make further investments dependent on governmental willingness to cooperate in this regard. Sometimes they can also make use of special economic zones, government subsidies or other types of public-law grants. It is also worth remembering that larger entities are able to obtain diplomatic assistance from their home state, and they can also afford crowds of lobbyists in order to obtain favorable legislation, fiscal policy or to push through their own political and economic agenda. Even in the absence of a real driving force, they are often the first to know the directions of new regulations, which allows them to adapt faster than the competition, which learns about new requirements and regulations only from the official legal journals.

With an appropriate market share, these companies can also participate in price fixing or informal oligopolies or cartels, in order to set the prices of a given product at a fixed level. It is much easier for such entities to enter into corruption or quasi-corruption schemes with the administrative bodies, especially since such relationships are often difficult to prove. Moreover, big companies eliminate competition by buying it up at early stage of its development. Finally, some large companies employing tens of thousands of employees or having a significant share in the financial market constitute such an important element of the national or even global economy that even in times of financial struggles they can count on government aid (*too big to fail*). In fact, this means minimizing the market risk. Paradoxically, in extreme cases, these entities, despite their ineffective business model, are even able to grow (carry out new public offers, look for new PE investors) in order to effectively counteract or delay their own failure. They often record long-term losses (Uber, Netflix, Tesla) by investing putting more efforts into eradicating competition and gaining a monopoly – like status. As a result, international concerns have a significant advantage over smaller entities, even if it was not necessarily the effect of using the scaling advantage as a result of reducing transaction costs.

Large entities also grow because they are able to effectively sell a narrative beneficial for them, e.g. impose trends in new technologies, legal requirements, certification or green financing standards. Thus, they can impose criteria which only they are able to meet at this stage of development. Their CEOs are contemporary celebrities whose media presence instantly reaches viewers and future consumers. Growing and scaling also allows them to better understand the market and users' needs, and thus help them make use of artificial intelligence algorithms (e.g. machine learning or deep learning). Moreover, they have the tools to enter new market segments, conduct subsequent rounds of financing on the private market or public offerings on the public market, and as a result effectively attract capital from the competition. Due to their size, they need not to worry about entry barriers (including the costs of disclosure obligations) known to start-ups and companies from the SME sector.

5. Conclusion

The above reservations do not change the fact that Coase's observations about the nature of firms as economic entities should be treated with due admiration – especially considering that his reasoning was based on an economy known at the beginning of the 20th century. A detailed analysis of Coase's works shows, first of all, that he was careful about his opinions and realized that there was a lot of liquidity between the two alternative ways of organizing work: the firms and the market exchange mechanism (Schwab, 1993: 362). Despite the criticism of *The Firm* from some free marketers, as well as the considerable approval from the socialists (quite contrary to *The Problem of Social Cost*), it is worth remembering that Coase's publications are kind of logical games (Cassidy, 2014) aimed at stimulating the reader's imagination (Schwab, 1993: 369). Thus,

it is only an introduction to further research on companies and the interdependence of transaction costs – as indicated by the author himself.

In fact, similar to other Coase's works, *The Firm* can be compared to a metaphorical water surface. You can look at it to see only a reflection of your own views. You can also immerse yourself in it, only to discover the infinite depth of problems that it opens up. Perhaps it is the inability to find the right answer to the questions posed by Coase that causes so many commentators to stick to the former, using Coase's work mainly to affirm their very own views.

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