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**A GENERAL THEORY OF THE FIRM:
FROM KNIGHT
TO RELATIONSHIP MARKETING**

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The purpose of this paper is to build an integrative framework for our understanding of the firm which would embrace all alternative theories in the field into one logical scheme. There are multiple views of the firm – microeconomic view, transactional costs view, legal view, organizational theory view, resource-based view, knowledge-based view, relationship marketing and others. The main idea of this paper is that all arguments of these approaches may be systematized and built into one integrative framework which may be called a general theory of the firm.

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The purpose of this paper is to build an integrative framework for our understanding of the firm which would embrace all alternative theories in the field into one logical scheme. There are multiple views of the firm — microeconomic view, transactional costs view, legal view, organizational theory view, resource-based view, knowledge-based view, relationship marketing and others. The main idea of this paper is that all arguments of these approaches may be systematized and built into one integrative framework which may be called a *general theory of the firm*.

Any theory of the firms should answer three basic questions: 1) what is the firm and why does it exist, 2) how the boundaries of the firm are determined, 3) how internal organizational structure of the firm is determined. A general theory of the firm should answer all these questions in that way that would make its answers valid for every particular size or type of firm — from SMEs to MNEs, from the traditional U-structure to all types of hybrid or network quasi-firms, from aging traditional industries to highly dynamic and innovative sectors.

All theoretical knowledge about the firm may be subdivided at a *core theory* which defines and explains the basics of every firm's existence and is relevant in any context and for any particular issue under consideration, and at some *extensions* which may be understood as emphasizing of particular elements of firm's life or particular factors which influence the firm's boundaries and structure, e.g. knowledge or cultural issues. It is very important to underline that those extensions and interpretations are not alternative lines of explanations comparatively to the core theory, but only focusing on particular elements in its framework. We could say that *everything is in the core theory*, and nothing actually new can be added to it. Of course, this is not to say that additions and interpretations are useless. They help to stress some important sides of reality and to look at them through different lens but the core theory stays unchanged in all these theoretical journeys.

I. THE CORE THEORY

The core theory of the firm states fundamental definition of the firm and enlists all major factors which determine its size and structure. It is built upon one simple idea from the economic theory — the market system demands for rational and responsible decisions on allocation of resources. Rational means maximizing benefits, responsible means caring about costs.

The fundamental relationship: employer-employee

A number of different definitions of the firm had been developed in economics, management and organizational literature in 20th century. Nevertheless, after all these developments the most fundamental idea of firm existence is still a Knightian one and may be explained in this way.

The firm appears in the market economy, which is built upon vertical and horizontal division of labor. Division of labor allows reducing costs because of economy of scale — when every individual concentrates on some specific task in the production the average costs go down. Before the division of labour reaches certain extent every job in the market economy may be conducted by an individual who personally takes care of all business decisions at this job. But after some moment these decisions about investments and production cannot be taken by the jobholder. A new “managerial” division of labor takes place — one person (entrepreneur) takes investments and production decisions and bears risk, and the other person (employee) only implements these decisions. Accordingly, the entrepreneur gets profit (a residual income) and the employee gets wage (a fixed payment).

This business model is called a *firm*. The firm begins when and where the entrepreneur hires his first employee. All other characteristics — legal entity, ownership, organization, hierarchy etc. — are only some consequences or developments of this basic fact. All other theoretical issues and implications in the theory of the firm — size, structure, hybrid forms etc. — are only some kind of variation and modification of this elementary relationship.

This basic idea was developed by Knight (1921) and confirmed by Coase (1937). A more detailed review of this theory development may be found in the beginning of the section III.

Managerial hierarchy

If the entrepreneur is successful and his firm starts to grow at a moment the employer finds that he/she cannot handle all decisions and needs help. Then the entrepreneur starts to hire assistants and the *managerial hierarchy* appears — a team of managers between the entrepreneur and all other employees. These managers are specialists in developing and implementing business decisions — the very same function which was transferred from employees to employer when the firm was born.

Inside this hierarchy everybody obeys to administrative commands instead of market signals, and this is what was emphasized by Coase when he was writing about the nature of the firm. But the fundamental essence of the firm is NOT the hierarchy as a coordination mechanism but the division of risk and responsibility. The coordination mechanism (hierarchy) is only a managerial tool which helps the entrepreneur to operate this business model with divided risk and responsibilities. This managerial tool is very important and a lot of things depend on its characteristics. But it is not a firm. It exists inside the firm. The managerial hierarchy helps the firm to be big but it does not constitute the firm.

The enlargement logic

How big? Where boundaries of the firm should be set? The first and the very simple answer is *the bigger the better*. Every additional sector of production added to the firm can bring extra profits to the entrepreneur. So from the point of view of the entrepreneur the boundary of the firms should be maximized because it earns extra money.

This is what we may call the basic **enlargement logic** of firm's size determination. Following this logic, many companies or businessmen like to buy other companies simply because this increases their total profit. If a businessman earns a lot of profit in one business he/she wants to own another business and to earn additional profit from it.

Sometime this firm's enlargement leads to growth of market power and may help to increase the market price — we may call this strategy **market power logic** — but this strategy has nothing to do with the firm itself. The market power logic is not about the firm but about control of the supply and demand. The purpose of market power logic is to increase the price, and it may be pursued without buying other companies, e.g. through a tacit collusion or cartel. Contrary, the purpose of the enlargement logic is to acquire profits (big or small) from other parts of production chain — sometimes horizontal integration. Both strategies — enlargement logic and market power logic may be pursued simultaneously but this fact also does not make them the same.

There is much sense in the simple enlargement logic, and it explains why many businessmen buy new companies in the same or other industries when they have free funds. These large integrated companies may be comparatively inefficient but they may continue to exist if they earn enough resources to compensate this inefficiency (e.g. through monopolistic position in a market). Nevertheless, as we will see further in many cases this enlargement logic (the bigger the better) simply does not work. There are two types of factors — *behavioral* and *technological* — which interfere and lead to other conclusions. Now we are going to explore these factors in more detail.

Behavioral factors (opportunism)

The main factor which interferes into the simple enlargement logic and radically changes its implications is the behavioral one. The problem is that all people are rational actors and prone to selfish behavior. In market contracts they are interested in maximizing their own benefits and not the benefits of the partner, and if it is possible to increase secretly the former at the expense of the latter they just do it. Particularly, if they are hired as agents (managers in the hierarchy) they maximize their own welfare and not the welfare of their principals. This secret benefiting at the expense of other party is called *opportunism* and comprises one of the main concerns of the *contract theory* — a special branch of economic theory dealing with problems of efficient management of contractual relationships.

There are two types of opportunism — *precontractual* and *postcontractual*, or *ex ante* and *ex post* in terminology of the pioneer of this theory (Williamson 1985). Both types suppose hiding some important information about some element of the deal.

In the first case — **pre-contractual opportunism** — this element is already materialized and cannot be changed, so the strategy of more informed part is to conceal this information and the strategy of less informed party is the reveal this information before the deal. The most common strategy here is

- **Hiding value.** The buyer or seller hides the real value of the good from other side of the deal. The most often case is when the seller knows that the good has a lower value than the price under negotiation but hides this information from the buyer. The opposite may happen less often because usually the seller is a more informed party in questions of quality of the good. Nevertheless, in industrial markets it may be also an important case because the value of intermediate good is usually determined not only by his

physical quality but by some production and market opportunities which are known mostly to the buyer.

In the second case — **post-contractual opportunism** — this element is not materialized yet and it could be materialized because of the actions of more informed party and the strategy of less informed party is to prevent this behavior of the partner. Here we have two common strategies of opportunistic behavior.

- **Hiding costs (moral hazard).** When one party (agent) agrees to fulfill certain services in the interests of another party (principal) it may fulfill its responsibilities in such a way that is not beneficial to the principal. The main strategy is the economizing of agent's efforts or *shirking*. Another strategy is to reload possible risks of some potential damage on the principal.
- **Hold-up.** When a contract is made and being executed some bilateral market power is created and if one side of the contract gets more market power it can exploit the vulnerability of other party and demand for a higher reward.

Both types of opportunism are critically important to effective contracting, though sometimes it is not easy to say which type — postcontractual or precontractual — takes place because the sequence of actions or principles of pricing and specifying the product may be different in various contracts.

In some contracts the service is specified only after the contract is signed. Here, the agent may boost value of some operations in the eyes of the principal and impose unnecessary services to the latter — this is the strategy of *hiding value* but it is practiced *after* the contract is made.

In some contracts at the stage of contract negotiation the pricing procedure may be based on cost plus methodology and here the buyer may be interested in boosting its costs — this is the strategy of *hiding costs* but it is practiced *before* the contract is signed.

As we can see sometimes it is hard to say is it precontractual or post-contractual opportunism. The crucial moment here is the issue of materialization of the hidden element. If it has materialized already and cannot be changed this is precontractual opportunism and vice versa.

Our next logical step is to discuss another important group of factors describing some fundamental characteristics of every particular case where a decision about firm's size should be taken.

Technological factors

These factors play an important role in our story because they create a structural landscape at which contractual relationships take place. This

structural landscape determines the technical possibilities for secret or apparent benefiting at the expense of others — in other words, establishes opportunities for opportunism.¹ Let us describe these structural characteristics and analyze how they can influence on the decisions about firm's size and structure.

Joint capital good. The first fundamental characteristic of technology is *indivisibility* of some factors of production. The economy of scale very often demands for using of some “large” capital assets which should be operated (or used) by a number of workers. The average costs of this way of production are much lower than average costs of an alternative technology where every worker has his own “small” capital asset for the same purpose. The examples of these “large” capital assets may be equipment, land, buildings and so on. Another important aspect of this “large” capital asset is that it is used and depreciated for a long period of time. But this aspect is much less important for our purposes than indivisibility of this capital good. Who should *own* these capital assets during all process of their use and what contracts should be written to allow individual workers to use it? The most efficient answer is the firm — the entrepreneur invests in the production of the capital asset and hires employees, taking all risks of making this business profitable. There may be an exception— production or distribution cooperatives where the joint capital good (e.g. mill or oil mill) is collectively owned by several individual producers who exploit it by turn for processing their own intermediary products which are then sold individually at the market or used in private consumption.

Joint product. The second fundamental characteristic of technology is *indivisibility* of some goods, which should be produced by teams of workers. These workers should apply their labour to production of this good simultaneously or consequently — it does not matter. The key issue is that it is hard to measure the exact contribution and responsibility of every team member for the final result of the team activity. So, the question is how can we be sure that there is *no shirking* in these teams? In other words, how can we be sure that nobody secretly cuts his or her efforts which should be in these teams? The most efficient answer here is again the firm which owner may be motivated to monitor the shirking of all team members (Alchian Demsetz 1972). Another important problem here is similar to the situation of the joint capital good — who should own the joint product if

¹ Williamson (1985) criticized attempts to explain boundaries of the firm solely through technological factors as “technological determinism.” Nevertheless, these factors play crucial role and influence decisions about the firm's size through behavioral factors.

the production cycle is long and demands for relatively high investments? This is another argument for the firm appearance.

Unique good. The good is new and was never sold at any market so both parties do not know its exact market value. They could try to invest in getting some information but when they do not trust each other this process may be very costly. For example, this may be a new invention, a new piece of art, a new deposit of a natural resource, and so on. Sometimes, the high costs of contracting may lead to the appearance of the firm but in many cases these costs may be reduced through designing of a special contract with variable price depending on the future benefits of the buyer.

Bilateral monopoly. The quality of the good is well known but there are only one buyer and one seller of the product. They should negotiate the price and could hide from each other their true evaluation of this good. This bargaining over joint profit distribution may be very costly.

Immeasurable products. The quality of some products and services cannot be specified and controlled by the principal. It may be a product or service with *subjective quality* which can be very difficult to measure because it has subjective nature. E.g. the designer develops a web-site, or consultant develops some recommendations to the managers of the company. Sometime this job may not have any material traces at all, e.g. sampling in stores, handing out advertisements, calling clients etc.

Professional knowledge. These services cannot be monitored by principal without special knowledge of some professional field. E.g. R&D activity or legal consultations — the principal may not understand in full depth all details of technological or legal issues which are involved in taking crucial decisions about size of investments and choice of strategies in these fields and may be manipulated by a more informed agent.

Hidden heterogeneous quality. There are many potential sellers of a product who deliver different qualities of this product but this may be revealed only after some time (if ever) after the contract is made. Revealing of this quality before the sale may be very costly or simply impossible. As a consequence, there is an *adverse selection* effect in this market (Akerlof, 1970, Spence, 1973).

Specific asset. In the economy with deep vertical and horizontal division of labor some intermediary products may be used in many different industries but others only in one or very few of them. This characteristic of an intermediary good is its *degree of specificity*. The more specific an intermediary good is the less demand it may find in other industries This characteristic has an enormously important implication. The intermediary goods with large demand from many industries may be produced in much larger scale. The large market allows for a competition of producers, for standards of quality and so on. Contrary, specific intermediary goods cre-

ate great market power of the buyer over the seller (Klein Crawford Alchian 1978).

External factor. Sometimes the product of agent may be easily measurable in quality and quantity but there is a possibility of positive or negative influence of some external factor on the final result of the production process. In this case the agent may shirk and explain the bad result with “external factor influence”. The important characteristics of this factor are its non-controllable and non-observable nature (Cheung 1969, Stiglitz 1974).

All these technological factors of particular industry or sector determine possibilities of various behavioral strategies (different kinds of opportunism) and eventually benefits and costs of alternative organizational forms. The main hypothesis of the general theory of the firm is that *the entrepreneur chooses those organizational forms which demonstrate the maximum net benefits comparatively to all other alternatives*. This is a neoclassical logic and there is still no better logic in modern economic and managerial sciences. Some alternative approaches will be discussed later in the section on extensions but we will see that at best these approaches have some complementary value to the core theory and its main optimization hypothesis.

II. FIVE INTEGRATION DILEMMAS

In this section we will discuss main organizational dilemmas which are solved by the entrepreneur who tries to define boundaries of his/her firm. There are five basic types of dilemmas reflecting different relatedness of sectors which may be integrated in one firm or stay separated in different firms.

Before we start with the description of these dilemmas we can make a general conclusion valid for all dilemmas. Taking into account all technological factors described in the previous section we can see that the production space is not continuous and divisible at any point, and boundary of the firm simply cannot be drawn everywhere. All production space consists from more or less *indivisible sectors*, and each one of them simply cannot be split between different firms. Boundaries of firms can be realistically drawn only between these indivisible sectors. For example, if we look at an assembly line or blast furnace or at the chain of continuous operations we can easily see that costs of potential opportunism is so high that we can never imagine these jobs to be separated between independent firms.

Vertical integration

The dilemma of vertical integration concerns decisions about integration of various stages in production of one product.

Usually this problem is known as *make-or-buy* dilemma faced by the firm which needs some intermediate product and decides should it create its own department to produce the component internally or it is better to buy this intermediary product in the market.²

This is really one of the most important contexts of vertical integration choice but there is another no less important issue which may be called *sell-or-process further* — the company should decide if it wants to sell its product to independent distributors or distribute it to final costumers by itself.

These two types of integration are known as *integration backward* (upstream) and *integration forward* (downstream) and comprise equally important organization choices which are faced by the firm. Nevertheless, these two situations may be analyzed as one common situation because the nature of arguments will be the same on both of them. In both cases the company compares costs of two alternatives — vertical integration and market contracting — and chooses the most efficient variant. These costs represent various threats of pre-contractual and post-contractual opportunistic behavior. Let us describe them.

Market contracting creates three opportunistic threats: 1) cost exaggeration, i.e. the independent supplier may overstate the real costs of production, 2) hold-up, i.e. the company may hold-up its supplier or the supplier may hold-up the company if a specific asset is at place (Klein, Crawford, Alchian 1978), 3) moral hazard, i.e. the supplier reacts slowly, does not invest in R&D, etc. All these opportunistic behaviors may lead to high costs of having independent contractors.

Vertical integration may remove these threats because the company may get the full information about costs of its own department, the company cannot be held up by its own department and the company may give order to its own department to act in this way as it is necessary to the company. But vertical integration is not an opportunism-free solution to this problem because it creates another important threat of opportunistic behavior — the possibility of shirking. The manager of internal department is protected from possible losses and does not have rights for possible profits from his department activity. That is why this manager does not have incentives to

² Another name for this dilemma is *sourcing problem* and two corresponding solutions are called *insourcing* and *outsourcing*. But actually the term *outsourcing* has another narrower meaning (see the section *Functional integration*).

find true cost-saving and performance-maximizing methods of operation. The firm can get access to full documentation of this department but there may be technological factors which create possibility of hiding some important pieces of information from the firm — immeasurable product, external factor, or professional knowledge. Thus internal department may generate higher costs than it could be possible with independent supplier in competitive environment.

Which costs is higher? It depends on the particular situation. In every choice between market and integration the rational entrepreneur should compare these two kinds of threat and choose the profit maximizing solution.

As we told before the technological landscape highly influences the size of these threats. Another important characteristic is the *structure of this intermediate product market*.

1. If this is a monopsony (the resource is consumed only by this firm and may be produced by many suppliers) then this firm has great market power over the price. The competition between suppliers can remove all potential opportunism from their side which was described above but would they be interested in supplying goods to a monopsonist who can abuse its monopsonic power at any moment?
2. If there is a monopoly (the resource is produced by the single firm but is consumed by many different firms in many different industries) all buyers may face a monopolistic price (a worst scenario of “explicit” opportunistic behavior) and also may be afraid to be exploited by the monopolist.
3. If there is a competition (the resource is produced many firms and consumed by many firms) than competition among suppliers may again drive the price to average costs and there is nothing to care about.
4. If there is a bilateral monopoly (the resource is produced by one firm and consumed only by one firm) this is the most favorable situation for mutual opportunistic behavior. Both parties may hide information about true costs and may try to hold up each other or abuse their market power in some other way.

The general conclusion is that all types of monopolistic power lead to the vertical integration in the absence of other ways of removing opportunistic behavior (e.g. cultural norms, antitrust regulations and so on). Contrary, bilateral competition in most cases works out all problems with opportunistic behavior.

Horizontal integration

The dilemma of horizontal integration concerns decisions about including the similar jobs (producers) from one stage of production into one firm. Here we have another set of factors which create two important non-behavioral economic benefits. At first, horizontal integration means an increase of scale of production which leads to the effect of *economy of scale*. Workers at one stage of production may enjoy common capital goods and share other indivisible costs (transportation, licensing, planning etc.). At second, the increase of production volume means the increase of market share and, consequently, market power. This may help to reduce costs, or increase the price — that is why horizontal integration is a highly attractive dimension of firm's enlargement for the entrepreneur.

May the entrepreneur expect to face some behavioral (opportunistic) issues in horizontal integration? The problem of hold-up in using of one capital good is effectively removed by the integration but then there arise the problem of shirking at two levels. At the bottom level, if there are no specific products of every worker (e.g. at conveyor or blast furnace) the entrepreneur faces the problem of team production — every worker may shirk at some extent. At the middle level the managers of integrated units feel themselves protected and do not care about cost reduction or productivity growth.

What is higher — technological and market benefits or behavioral costs of horizontal integration? It seems that in horizontal case *the former is always larger than the latter*. The economy of scale and market power can increase the benefits so much that all corresponding behavioral costs of opportunism will be insignificant. This means that no entrepreneur has ever lost from horizontal integration strategy and this dilemma should be always solved by the entrepreneur for the sake of integration.

Then, as it follows from this analysis, we should expect the maximum degree of horizontal integration in the real economy. This expectation is fully supported by what we can see in the real world. Many industries are dominated by large companies with 20-30% of the market share and would be happy to grow even larger if they would not be restrained by antitrust authorities. Some industries are dominated by pure monopolists but these are natural monopolies which do not face the horizontal integration dilemma as it stated above. But some industries are highly competitive and consist from multiple producers with insignificant market share. Why does this exist? The answer is simple — there is no possibility of significant economy of scale in these industries. Actually, there is a potential of sharing some indivisible costs in any industry, but in these industries the effect is so small that it is outweighed by the growth of opportunistic behavior at

bottom level or in the managerial hierarchy. That is why this business is doomed to be small. A lot of services — taxi, hairdressing, cleaning, etc. — cannot be effectively delivered by the large horizontally integrated companies because there is no significant economy of scale but there is high probability of opportunistic behavior.

Functional integration

The third dilemma is a bit different from two previous ones because it is not about integration of various “segments” of production space (vertical or horizontal). It exists in a different dimension. It deals with a choice about sourcing of some *managerial or service function*, e.g. marketing service or human resource service. In a small firm all these managerial functions are usually performed by the entrepreneur who does all marketing research or hires and manages all personnel himself/herself. When the firm starts to grow the entrepreneur hires managers who become responsible for some specific managerial functions. In large firms these functions may be performed by separate functional departments. Nevertheless, this way of organization is not a single possible solution. Actually, *any of these managerial services may be bought from an independent contractor*. And the choice between internal and external production of some managerial function or production service comprises the *functional integration dilemma*.

The solution to this dilemma may be fully explained with our basic set of arguments — behavioral strategies which determine potential losses from opportunism and technical factors which shape these behavioral strategies.

Internal solution. In many cases the external production of a managerial function is quite unprofitable because it demands much specific investments and can lead to hold-up problems. Another reason is that to perform this function well the supplier has to process a lot of information but even a minor shirking here may bring large damages to firm’s performance. Consider, for example, strategic management or financial management functions. Of course, some kind of analytical semi-standardized products (consultations, business plan development) may be bought from outside companies but the basic function of strategic management or financial management cannot be externally produced.

External solution. However, in some cases some managerial function or a significant element of it may be transferred to external suppliers. The criterion for the transfer is a standardized character of these services. E.g. accounting services or some personnel administration services (keeping payroll or other paper work) may be transferred to the external provider with large experience and low costs. It is this transfer of some internal

function to external provider which was initially called *outsourcing* before the term started to be applied to all external contracts.

Related integration

In previous three dilemmas we were talking about production of *one particular product* and various dimensions of integration in this single product space — vertical, horizontal and functional. But actually the entrepreneur may follow another type of integration which is similar to horizontal — *integration of production of other products* which are in some technological or marketing sense connected with the original product of the firm. For example, it may be integration in one firm of production of trucks and cars, or recording and concert businesses. So as these productions are close in some technological or market extent this type of integration is called *related integration*.

What are economic and behavioral consequences of these integrations? Economic benefits are similar to the effect of economy of scale because in production of these related products the firm may use the same capital goods — this effect is called *economy of scope*. This is the main positive effect from related integration because the integrated products are sold in different markets and this integration does not lead to a direct increase of market power in any particular market. Nevertheless, market power may grow because of some indirect consequences (e. g. increase of financial resources of the firm, increase of brand value and so on).

But there are behavioral costs — the potential shirking of new managerial structures which appear in the firm. The top managers who are responsible for production of new products do not have rights for residual income and they will not work as hard as would independent entrepreneurs.

The final solution of this dilemma depends on the proportion of economy of scale benefits and shirking costs of a new product which production may be internalized by the firm. The size of economy of scale directly depends on the extent of relatedness of this new product to original product of the firm.

One of the theories of related diversification was based on the *excess factor capacities* assumption (Caves, 1971; Gorecki, 1975; Penrose, 1959). This theory suggested that underused assets may lead firms to search for another ways of their application and the diversification is the best solution to this problem. This “historical” logic is fully compatible with the basic explanation proposed above. The theory of multiproduct firm proposed by Teece in 1982 was also based on similar analysis.

Conglomerate integration

This kind of integration supposes that production facilities which are being integrated are *not connected technologically* in any extent. For example, the entrepreneur combines in one firm a tires factory and a dairy farm, or a bank and a tour operator.

Why this may happen? The first and the very obvious answer — this is the simple *enlargement logic* (see Section I). New businesses bring new profit. A successful entrepreneur wants to own more businesses and enjoy more profit from all of them.

Nevertheless, another relevant question arises here — why should we call these totally unrelated production facilities owned by one entrepreneur a firm? Essentially they are separate firms owned by one entrepreneur and there are no material arguments to treat them as one firm. The only reason to do this is the legal one. These businesses are called one firm because they formally belong to one legal person.

This seems to be correct but actually it is not that simple. Let us remember our core definition of the firm — the firm is a relationship between employer who takes responsibility and residual income and employee who agrees to follow commands in return for fixed income. These relationships are still in place — *the owner appoints top managers to all companies in the holding firm*. And actually the legal status of holding does not have any serious meaning here. If these companies were owned by the entrepreneur individually (as separate legal entities) the nature of relationships between these companies would not change. Essentially, we may say that if an entrepreneur owns several companies (combined into one legal person or standing alone) we may call this a holding or a conglomerate.

So, the main function or main characteristic of conglomerate is that the entrepreneur appoints top managers of the companies. It is the entrepreneur who takes the responsibility and earns the residual income. But will this system be efficient if we take into account behavioral factors? The top managers of these companies do not have right to residual income of their companies so their motivation will be lower than motivation of top managers of similar companies who own these companies or where owners spend their full time for appointing and monitoring top managers and do not detract to other businesses. *Ceteris paribus*, such companies with owning top managers should have higher performance than companies in the holding structures and should push the latter from the market.

What do we know about real conglomerates? There are some other hypotheses of conglomerate existence.

Risk diversification. The first is that conglomerates are special structures which may allow reducing risk of investments. There is some logic

behind this hypothesis but actually there is much better way of diversification of risk — buying a portfolio of stocks with different characteristics. It is much more liquid and more stable in terms of risk investment.

Strategic control. The conglomerate may be interested in strategic control of activity of all its companies to prevent undesired market behavior of them. This may be the case if these products are technologically independent (that is why this is a conglomerate), but the markets of these companies are somehow connected. For example, hotel, restaurant, and fitness center in a resort are technologically unrelated but provide services for the same captive audience. Any of these businesses may behave opportunistically and to charge higher than average prices for its services because the demand of captive audience is relatively inelastic. This would be direct transfer of some portion of aggregate demand of this audience to this opportunistic business, that is why a holding company which owns all three businesses (hotel, restaurant and fitness center) may be more efficient in this case. The similar question is why Russian oligarchs buy newspapers and radio and TV channels?

Market power. Any company inside the holding is more protected against the competition on its particular market because in case of unfavorable market situation (weak demand or intensive price competition) other companies of the conglomerate may provide the troubled company with funds to sustain the crisis. This may even help to conduct such market strategy as predatory pricing.³

Opportunistic behavior. However, not all explanations of conglomerate are based on the optimality assumption. Some versions of their existence assume quite opposite — the conglomerates are a sort of inefficient consequences of badly structured contracts with top managers. If top managers of the conglomerate are rewarded on the base of market capitalization of their company than they are interested in enlargement of the company by any means and if the conglomerate has free resources or can attract credit or equity financing the latter is used to enlarge the company and to get bonuses or stock options (let us remember the pump-and-dump strategy and its classic application by Enron managers). This hypothesis was proposed by Mueller (1969) who tried to explain the surprisingly high wave of conglomerate M&A in the 1960s. Another version of this hypothesis was shaped by Jensen (1986) who proposed a “free-cash-flow” explanation of diversification.

Failing firm/industry. Another explanation of conglomerate appearance is based on the concept of failing firm or failing industry which assumes that a firm in the shrinking industry may try to buy a new firm in a growing

³ This threat was noticed by antitrust authorities as far as 1940s (Williamson, 1985).

market to stay in business in the long run. This is just a strategy of transferring all residual resources into another business. The empirical test of 56 conglomerate M&A in 1966-69 in US did not support this hypothesis (Mueller 1969).

Some empirical research of conglomerate profitability showed that they have a bit higher return than independent companies (Econtal Research 1969, Kumps 1975) but other researchers did not find support for this observation (Utton, 1969).

Another research was directed to compare return of conglomerates and independent companies during various stages of economic cycle (Hill, 1983). It was found that during the boom in financial markets of 1966-1969 the profitability of conglomerates was much better than independent companies but during the depression of 1969-1971 it was much lower. This fact may lead us to two following conclusions. First, conglomerates are much more difficult to evaluate that is why they become an object of financial speculations and grow higher and fall lower than independent companies. Second, the average return of conglomerates is the same as of independent companies and there are no significant economic benefits of this type of the firm.

* * *

These are all essential elements of the general theory of the firm. The firm is the relationships between employer and employee about risk and income distribution. Managerial hierarchy is only an administrative tool and does not constitute the firm. The size of the firm is determined by technological factors which, from one side, create various economics of scale and scope, and from the other side, create possibilities for opportunistic behaviour. All choices about firm's boundaries may be represented as five types of integration dilemmas.

Nothing principally different may be added to this theory. There are several developments of this theory which we discuss in the next section but essentially, as you will see in the next section, they do not constitute a new theory. They only specify and emphasize some important elements of the same core theory.

III. EXTENSIONS AND INTERPRETATIONS

In this section we will discuss all major approaches to the theory of the firm in their chronological order and will try to demonstrate that they are

useful extensions and interpretations of the core theory which do not change the basic premise of it but shed some additional light to important sides of firms' reality. At first, we will make a short review of the core theory development.

A short history of the core theory

For a long time there was no theory of the firm in the economic science. In 19th century actually there were no large managerial hierarchies which began to appear only in the middle of the century in railroads and in the end of the century in the manufacturing industry. In the classic political economy the firm was associated with the *capitalist* — a rich man owning the means of production and able to hire the working people to produce goods and sell them for profit. The capital resources necessary for buying machines and roundabout capital — this was the key factor of this system. The main efforts of economists in 19th century were directed to explaining prices, wages, rents and profits in this economy. In the beginning of the 20th century they were successfully crowned with foundation of microeconomics and this fruitful methodology of supply and demand analysis for several decades kept the attention of economists' community.

Interestingly, the first insight about the nature of the firm was grown out of this price theory discourse. Although all factors' incomes — wages and rents — were successfully explained through supply and demand but the last and the most mysterious one — profit — remained unclear. The *theory of profit* for a long time remained one of the least explored and understood area of microeconomics. There was Marxian theory of exploitation, Nassau Senior's abstinence theory, special-type-of-labour theories (from Mill to Marshall), and so on.

The work *Risk, Uncertainty and Profit* (1921) by Frank Knight was an attempt to answer this century old problem. Knight introduced the important distinction between risk and uncertainty and suggested that the function of the entrepreneur is to take decisions under uncertainty which are costly and may lead to losses. That is why the entrepreneur takes this risk and allows all other people to be "employees" and get a risk-free "wage" while he/she gets the right to manage their labour and to appropriate all residual income which is called "profit". This uncertainty-based distinction between employer and employee is still the key starting point of the general theory of the firm which is proposed in this paper.

The first explicit question about the nature of the firm was asked by Ronald Coase (1937). He rejected the explanation of Knight and claimed that the specialist in analyzing and taking decisions under uncertainty may be hired through the contract and this fact cannot be the reason of the

firm's existence. The true reason for this is that coordination of producers inside the firm is less costly than the coordination of them through the market.

We can see that the main difference between Knight and Coase was that the former explained the existence of the firm as employer-employee relationships in questions of taking responsibility but the latter explained the firms as a better coordination effect comparing to market. Nevertheless, these are not two different explanations but one explanation in different words stressing different sides of one coin.

With growth of division of labour *some parts of production space* demand to be planned and coordinated by someone who understands the production purpose and has the wish to serve this function. The usual coordination mechanism of market economy — the markets — do not work here because at this stages of vertical and functional division of labour the intermediary products of individual workers are so specific (have so narrow purpose) or changeable that *there are no markets at all*, or if you wish, there is a complete market failure for these products. These intermediary products have value only in this particular project (firm) that is why the originator of this project — the entrepreneur — should take all responsibilities for planning and implementing the project and to buy the consent of individual workers to perform these specific functions for a guaranteed wage.⁴

The fundamental contribution of Coase was the suggestion of *a new discourse* — comparisons of firms and markets as alternative organizational forms — and providing *a general hypothesis* that the best form should have less transaction costs. Nevertheless, his explanation of the factors which determine transaction costs was very superficial — he stated that inside the firm 1) it is easier to get information about prices, 2) the number of contracts is smaller and 3) there could be tax advantages. The last two arguments cannot be taken seriously⁵ but the first one was a useful step in the right direction. He could not provide the main instruments for this journey — the concept of opportunistic behavior and structural factors

⁴ Some latest attempts to refine the nature of the firm emphasize the same idea — the impossibility to realize the entrepreneur's visions and innovations without creating a firm (Witt 2007, Zander 2007, Pitelis, Teece, 2009). Some researchers even talk about special *entrepreneurial theory of the firm* (e.g. Tambovtsev 2010), but this is just the old Knightian idea interpreted for some special cases (e.g. risky innovations).

⁵ There are no strong arguments that there will be fewer contracts inside the firm. The contracts inside the firm may have longer term but the same may be true about market contracts. Tax advantages are also a secondary and conditioned factor which can make some influence but cannot explain the nature of the firm.

which lead to this behavior — but it would be too naïve to think that it was possible to make all these discoveries in one paper.

The later progress of this theory went right in this direction — understanding the fundamental reasons why firms may be cheaper than markets. After some period of ignorance of this topic several authors started to propose various ideas for a new understanding of the firm.

In 1971 Oliver Williamson published his first paper on vertical integration where he tried to find realistic explanations for replacing the market with the firm. In this paper the terms like *contract incompleteness*, *moral hazard* (borrowed from Arrow's 1969 paper), *strategic misrepresentation risk*, and *internalization* of market exchange were introduced into analysis to show how market failure may lead to vertical integration as a cost-efficient solution.

In 1972 Alchian and Demsetz proposed their version of the existence of the firm which was based on the *team production* concept. This concept refers to various types of collective production activity where there is no individual product of every member but the joint product of the team and it is easy to shirk in some extent. That is why there is the *metering problem* — the task of measuring individual contributions — and this problem may be effectively solved only by the monitor who has right for all residual income (i.e. has incentives not shirk by himself/herself). This is where the idea of shirking first enters the analysis of the firm. In 1976 Jensen and Meckling demonstrated that this story was not limited only to the team production.

In 1978 Klein, Crawford and Alchian proposed the idea of the *specific asset* which is created after the contract is made and opens window for *hold-up* behavior when the other party demands for changing terms of the contract and exploits the vulnerability of the specific asset owner.⁶ A formal interpretation “explicitly non-contractible investments” was developed later by Grossman and Hart (1986) and Hart and Moore (1990).

In 1985 Williamson incorporated all types of opportunistic factors (including shirking factors which were clearly absent from his previous analysis) in his book *Economic Institutions of Capitalism* which became the most comprehensive description of various cases of choice between the market and the firm.

⁶ Interestingly, that although this concept became one of the main factors in explanation of vertical integration Coase rejected to admit its importance and took the firm position that any hold-up problems may be ruled out through long-term contracts (). The long and sad discussion with Klein could not change his position.

One of the basic claims in Alchian and Demsetz (1972) was that the firm should be considered as a *nexus of contracts*. This was supported by the methodologically individualist notion that the firm is not an individual and we should not talk about firm's decisions or firm's strategy. This idea received the support in further research, and Fama (1980) and Cheung (1983) even called for an abandonment of the concepts of "the entrepreneur" and "the firm". This suggestion may seem correct at the first sight because any hierarchy may be seen as a bundle of contracts. Nevertheless, it is inferior from our core theory's view. The firm is the relationship between the entrepreneur and the employees which may be, of course, called a "nexus of contracts" but this metaphor does not reflect the essence of this relationship — the distribution of risks and responsibilities.

Sociological theories

One of the first alternative understandings of the firm had been developed by the closest neighbor of economics in social science family — organizational theory which demonstrated very active growth in 1960s and 1970s.⁷

One of the major approaches there was the *contingency theory* which suggested the dependency of the organizational structure from the environmental and technological factors.⁸ Actually, this is exactly the idea behind the theory described in the previous sections (i.e. the general theory of the firms is a contingency theory). The main difference in the methods and rhetoric of two literatures are: 1) the organizational theory was focused not only on the firms but also all kinds of governmental and private organizations, 2) the organizational theory was developed by the social scientists who was not so heavily based on the methodological individualism and the maximization choice, and were used to a less rigor analysis. That is why the frameworks of the organizational theory were much more abstract and diverse than the approach of the economic theory of the firm.⁹

For example, Woodward (1958) argued that organizational structure (span of control, centralization of authority, and the formalization of rules

⁷ For a more general review see Klemina (2009).

⁸ The previous theories of organizational structure — Weber's bureaucracy theory and Taylor's scientific management — searched an ideal organization form and neglected the influence of the situational factors.

⁹ Another important feature of this literature was that it was focused mostly on the *structure* and even considered the *size* of the firm as an independent variable of internal environment which influenced the structure.

and procedures) highly depended on the technology. Lawrence and Lorsch (1967) stated that in complex environments the organization needed to develop separate departments to confront differing environmental segments. Blau (1972) suggested that the size of organization depends on the homogeneity of tasks which allows extracting benefits from common administration (more common tasks lead to a large size). Heterogeneity of tasks demands for differentiation in administration.

An important book was published by Thompson (1967) who made many specific observations and generalizations about organizations which, in our terms, may be understood as an approach for describing the *technological landscape* (see the section I). For example, Thompson identified *three general types of interdependence* among unit personnel and organizational units: pooled, sequential, and reciprocal;¹⁰ *three types of coordination*: standardized, planned, and mutual adjustment;¹¹ *three general types of task processes*: long-linked, mediating, and intensive,¹² and so on. The combination of these factors should be accounted for if we wish to understand and explain particular organization. These classifications were later used by some proponents of contingency theory in their analysis. It is clear that their role is very similar to our technological factors — they determine the possibilities for opportunism. And it seems that the general theory of the firm could gain some new insights from Thompsons' framework.

The contingency approach was actively criticized by the paradigm of *strategic choice* (Child 1972) which holds that there is much freedom in the choice of organizational form and, actually, the organization does not simply adjust its behavior to the environment but may actively participate in adjusting the environment to its needs (through a political process). To better understand this contradiction between two theories we should make

¹⁰ In *pooled interdependence*, each team member or unit makes a specific contribution to the outcome by adding its personal knowledge or work. In *sequential interdependence* the product of one member or unit depends upon the product of another. In *reciprocal interdependence*, members or units supply each other with some resources.

¹¹ Under *standardization* there are established rules for how people should coordinate their activity. Under *planning* there are not such rules because tasks are not standard, therefore team members must plan their coordination processes. Under *mutual adjustment* the planning is also impossible and then constant communication is required to make sure that activities are performed with minimal confusion and maximum benefit.

¹² *Long-linked processes* require the completion of various task activities over time (e.g. assembly line). *Mediating processes* link together individuals or groups that want to be interdependent for their mutual benefit (e.g. the broker links buyers and sellers). In *intensive processes* the next operation is dependent on the effects of earlier operations (e.g. military operations).

two observations. First, from the point of methodological individualism and maximization paradigm there are no contradictions at all — the strategic choice should be a choice of the most profitable structure *for a given technological landscape*. Otherwise, how could we name this strategic choice rational? Second, the task of adjustment of environment is possible only if we talk about adjustment of some institutions or political structure (it is hardly possible to adjust the technology). Third, this task is available only for large organizations and the “strategic” choice of small organizations should be fully contingent on the environmental conditions.

Another important approach in the organizational theory was the *resource dependency* paradigm originally exposed by Pfeffer and Salancik (1978) and focused on various power relationships between organizations which are determined by the fact that one company depends in some resources from other organizations. One strategy of removing this dependency was *constraints absorption*, or, strictly speaking, mergers and acquisitions. It is not hard to notice that this hypothesis is based on the same idea as all our integration dilemmas do — dependency (i.e. market power) creates possibilities for opportunistic behavior and may be removed by vertical integration.

This paradigm caused large number of theoretical and empirical research. For example, Casciaro and Piskorski (2005) studied the data on inter-industry mergers and acquisitions among U.S. public companies in the period 1985–2000 and found that, while mutual dependence was a key driver of mergers and acquisitions, power imbalance acted as an obstacle to their formation. This finding is also fully compatible with the general theory of the firm view: only bilateral monopoly is a guaranteed cause of contractual problems, but when there is a competition only at one side of the market the other side may enjoy the fruits of its privileged position without any mergers. This party even *should not* integrate as it is argued by the resource-base view (see the next section), because it can extract long-term rents only at the monopolized stages of the value chain.

The last concept in the organizational theory which we need to mention here — *institutional isomorphism* — is a more sociological one because it is based on the traditional sociological idea that behavior of every social actor depends on social norms and every actor seeks to be legitimate in the eyes of his/her community. This concept was initially outlined by Meyer and Rowen (1977) who noticed that there are some generally accepted myths about organizations in the society and many decisions about organizational design are taken ceremoniously in order to gain or maintain legitimacy in the institutional environment instead of real consideration of costs and benefits. DiMaggio and Powell (1983) developed this thought further and proposed the idea of isomorphism — the homogeneity of or-

ganizational structures appeared as a result of various institutional pressures. *Coercive* pressure comes from demands of regulatory or more powerful organizations. *Mimetic* pressure is the desire to copy successful forms under high uncertainty. *Normative* pressure is generated by the similar attitudes and approaches brought into the firm by professionals from the same educational institutions.

This approach which is also called *new institutionalism in sociology* usually is often represented as an alternative explanation of organizational choice contradicting new institutional economics with its transaction costs analysis. The firms do not think about transaction costs, they want to be legitimate and choose the commonly accepted organizational forms and institutions.

Nevertheless, there is no contradiction between these approaches. To understand this we should ask ourselves: *where are commonly accepted organizational forms and institutions come from?* They cannot be copied from nowhere and they cannot be arbitrary. Instead of this it is reasonable to assume that they were found by some trial and error process in the past as the most efficient forms with minimum transaction costs but after that they become spread in the organizational community by simple copying of the best practices. In other words, both approaches answer different questions: new institutional economics explains why the commonly accepted organizational forms appeared and new institutionalism in sociology describes the process how this forms spread in the community.

Summarizing all this, we can notice that sociological theories had not proposed any real alternatives to the economic explanation of the firm. The contingency theory and resource dependency theory restated the same ideas but only in other terms and rhetoric (different interpretation), and institutional isomorphism was focused on the other aspect of the choice — mechanism of spread of optimal forms in the organizational community (important addition to the general theory of the firm which does not undermine its basic principles).

Resource-based view

In 1980s the strategic management literature produced a new approach to find a sustainable source of competitive advantages (Wernerfeld 1984, Rumelt 1984, Barney 1986, Diericx Cool 1989). This approach supposed that only rare valuable resources which cannot be reproduced by competitors may be used to earn higher than average rents in the long run. The approach was called resource-based view (RBV) and soon became a very popular theory and a major alternative to an older Porterian positioning

framework. The key concept of this approach was the idea of *valuable, rare, inimitable, non-substitutable* (VRIN) resources (Barney 1991).

Although the RBV theory is a managerial approach which main purpose is to give some *advice* to managers how to run their companies it may have an important implication for the positive theory of the firm. What implications? Is this a new theory of the firm or just a comment to some existing theories?

The first attempt to answer this question was undertaken by Conner (1991) who compared RBV with five established theories of the firm (perfect competition model, Bain's industrial organization theory, Schumpeterian and Chicago responses, and transaction cost theory). She suggested that RBV both incorporates and rejects at least one central feature of each of these theories and generally may be understood as a new theory of the firm which assumes its own rationale for firm's existence independently from opportunism considerations. This rationale is the ability of the firm to create unique productive bundles of resources which cannot be reproduced in arm's length transactions and in other firms. As an example Conner used the imaginary situation with tacit knowledge which can be used in an integrated firm but not in contract relationships. This was the weakest point in Conner's argumentation — this valid example with knowledge resource was too narrow for the general RBV approach and would be more appropriate in the knowledge-based views on the firm (see the section on KBV theories below).

The question may be answered on the basis of the proposed general theory of the firm. The RBV represents a modification of the basic enlargement logic (the bigger the better) of this theory: it is unreasonable to add to the firm competitive sectors because there is no profit in these sectors in the long run. It has sense to add only *sectors with some market power*. Further, it leads to a modification of the logic behind all five integration dilemmas.

For example, when the entrepreneur considers the dilemma of *vertical integration* he/she should take into account not only the potential opportunism of the supplier or the customer but also if the latter has some VRIN resources. Does this change the solution of the dilemma? Yes, if the resources are different, because in the case of homogenous resources all answers are already given by the original logic — if there is competition among suppliers the integration does not make sense. But if we assume that resources are different then all suppliers have different profits (or Ricardian rents) and for the entrepreneur it makes sense to integrate those suppliers who possess those VRIN resources which bring these rents.

If we consider the *horizontal integration* dilemma taking into account the heterogeneity of resources RBV arguments also may modify the solu-

tion. The firm gets some gain from economy of scale but it may get even more gain if it integrates the resources with good VRIN characteristics. E.g. if the company is allowed to have only 30% of market share and, consequently, may own only 30% of all production facilities it is much better to have the best VRIN resources in these 30% of production facilities and therefore increase the size of profit (to add some Ricardian rents to it).

The same argumentation may be build in the case of *related integration* — presence of VRIN resources in the integrated sector enhances the arguments for integration (this topic was analyzed by Teece, 1980, 1982).

It seems that in the case of *conglomerate integration* the importance of RBV arguments reaches its maximum because in this case there is a deficit for all other arguments. Perhaps, the RBV theory of conglomerates is one of the most viable and relevant explanation of successful conglomerates as the collection of independent businesses based on various VRIN resources.

The next question is if these resources may lose these VRIN characteristics after the integration. First, it certainly may and will happen if these VRIN characteristic are based on human capital (e.g. managerial or innovative skills and talents) which does not bring stable return in all circumstances. A hostile takeover or unwise management after integration may eliminate the favorable environment for fruitful functioning of these resources. Second, the size of these rents may be comparable with costs of opportunistic behavior of integrated firm and in this case the integration strategy becomes doubtful. But if the VRIN characteristics are based on “hard” physical characteristics of resources and cannot be lost even with not very wise management then the RBV logic may significantly change the solution of vertical dilemma integration.

Therefore, RBV theory of the firms brings into analysis the heterogeneity of resources which modify solutions of integration dilemmas provided by the core theory. Nevertheless, the basic principles of the core theory remain unchanged.

Dynamic capabilities approach

In 1990s another version of RBV was proposed by several authors (Teece et al., 1990). This version assumed that the most important source of competitive advantage is not some particular resources but *dynamic capabilities* of the firm — ability to continuously create new productive combinations of material and non-material resources. The key logic behind this approach was that all resource-based advantages tend to vanish with time due to natural forces as well as competitive efforts of other companies. That is why the only true source of sustainable long term competitive ad-

vantage may be the capability of a higher order — the capability to find new VRIN resources and to create new advantageous combinations of them.

The differences between two versions of RBV theory were well summarized by Katkalo (2006): the first approach is a static one, the value of resources are created externally, and they earn Ricardian rents; the second approach is a dynamic one, the value of resources is created internally and the rents are Schumpeterian.

What implications may follow from this approach to the theory of the firm? The first idea is that the entrepreneur itself is one of the most valuable resources and the presence of a good entrepreneur in the firm is one of the major factors for sustainable comparative advantages and larger rents. But does this theory have some influence on the size of the firm? Does it change the solution to integration dilemmas? We can say that the better dynamic capabilities of the entrepreneur (the firm) the better decisions will be found for all integration dilemmas — the firm will have the most profitable shape of its boundaries. But the dynamic capabilities concept cannot give us any additional arguments for analysis of this issue. This fact reflects the general methodological problem of the dynamic capabilities concept — this is a very general characteristic of high level of abstraction which can be used for a broad philosophical discourse but is hardly applicable to non-tautological explanation of real choices of integration dilemmas and other issues in the positive theory of the firm.

Knowledge-based view

Several approaches in strategic management and theory of the firm literature stressed the importance of *knowledge* as a key factor determining competitive advantages and firms' structures. This analysis may be understood (and often positioned) as an extension to the resource-based approach though historically it started to develop somewhat earlier and in various parallel traditions of thought. The common idea of all these approaches that the firm is not just a bundle of resources it contains something else — some collective knowledge and abilities to act together which were accumulated during development of the firm and will be lost if the firm ceases to exist.¹³

¹³ The question about the “place” where this collective knowledge reside — only in people or somewhere else in the firm (see the discussion in Tambovtsev, 2010) — is not important. What is important is that this collective knowledge is productive only until these people stay together. And similar team of people hired individually from the market will not have the same productivity immediately because they need time to

Penrose (1959) was the first to propose a picture of the firm as a *pool of intangible resources* and stressed that the managerial team is not just a sum of managers but some common experience and skills.

The evolutionary theory of the firm by Nelson and Winter (1982) was also based on a similar idea that some implicit *routines* plays role of “skills of an organization” and define its competitive advantages.

The theory of multiproduct firm proposed by Teece in 1982 admitted that one of the jointly used factors may be special knowledge of the firm — this was an obvious step toward knowledge based view of the firm.

The idea of firm’s competencies was introduced into strategy literature by Hamel and Prahalad (1990) and they also understood by this concept something supra-personal, existing in the community¹⁴, though they did not make any implications to the theory of the firm.

These implications were provided by Kogut and Zander (1992) who proposed a new *knowledge-based view of the firm* as a bearer of tacit, social, and path-dependent organizational knowledge. The knowledge may be produced and reproduced in a social setting, and it is inseparable from this setting, and is not fully reducible to individuals. That is a fundamental reason for existence of the firm.

Another version of *competency theory of the firm* was explicitly (and independently from Kogut and Sander) formulated by Foss (1993) who proposed it as an *alternative* to the contractual theory. Two main issues of the theory of the firm — its existence (nature) and its boundaries — may be answered with the help of this theory. The existence of the firm is explained by the unique competency of the entrepreneur who “can sell his services through a contractual relationship, or start a firm” (p. 136). The boundaries of the firm are determined by the fact that competencies of the firm allow producing efficiently “more of the same” and “more of something closely related” and to do vertical integration or diversification (similar to the argument of excess capacity, see the section on related diversification).

However, in 1996 Foss published a paper with criticism of Conner (1991) and Kogut and Zander (1992) approaches to KBV theory as an independent argument of existence of the firm and implicitly rejected his own previous position on that issue. He criticized these authors for technological determinism (see the footnote in the section on technological factors above) and stated that knowledge-based arguments are necessary but

build a similar collective knowledge inside their team. The more complex knowledge, the longer time.

¹⁴ “Collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technology” (p. 82).

not sufficient for the existence of the firm. It is impossible to explain the firm without accounting for opportunistic behavior.¹⁵

Another version of the knowledge-based view of the firm was suggested by Grant (1996) — the firm was seen also as an institution for integration of knowledge but its main task was not creation of new knowledge but facilitating the process of application on knowledge residing in individuals. In a more recent research (Almeida, Song, Grant, 2002) he tried to show that firms do better in questions of international innovative activity than alliances and market contracts.

Therefore, many researchers stressed the importance of the firm as a knowledge managing organization. Does this change our core theory assumptions?

If we try to relate this knowledge-based view to the core theory of the firm from the first two sections, we may see that the former is an important extension of the latter which does not change its basic arguments but draws our attention to some specific cases. Knowledge and competencies which exist in the firm may be understood as a *joint capital good*, which is produced inside the firm and used for increasing of the firm's performance. Contractual problems do not allow producing this capital good through market that is why it should be developed and maintained inside the firm. It is a useful addition to the spectrum of cases but this addition again does not make a revolution in the core theory. At least because there are many other types of firms which are not built around some team of knowledge workers or knowledge-intensive production. Consider barbershop or fast food restaurant, transportation or warehousing companies — usually they do not demand for some specific knowledge and do not lead to creation of special bundle of competencies which are not known in the market.

Closed vs. open innovations

In the previous approach the necessity to build and use knowledge demanded creation of the firm and vertical integration. Besides, there is another important problem of using knowledge which is also connected with

¹⁵ Ironically enough, for justification of that claim Foss used the same thought experiment which was used previously in his 1993 paper to proof his previous position. He asked the reader to imagine a society with absolutely moral people where no firms should exist accordingly to the contractual perspective but where still some firms and vertical integration may be found because of accumulated competences. However, in the 1996 paper Foss suggested that without opportunistic threats all these collaborations could be conducted through market contracts and the competency theory is not enough. Did he ever admit this self-contradiction?

the problem of opportunism — the problem of *protection of firm's innovations* which once made may be leaked to the market and used by all other companies. In this case the firm may lose the opportunity to get reward for its investments in creating this knowledge. So, when a firm prepares to make some innovations it must think off some mechanism to prevent leakages and free-riding of other companies. A contractual solution to these issues may be rather expensive and technically unachievable that is why vertical integration again becomes a solution. That is why a traditional approach to creation and protection of innovations supposes the maximum degree of vertical integration in innovative process.

Nevertheless, as we know from our core theory of the firm there may be too much integration. Large companies lose efficiency because of shirking problems which accumulate at all levels of managerial hierarchies and lead to inefficient decisions which outweigh the benefits of integration.

As a response for these problems a new alternative concept of *open innovations* (Chesbrough 2003, 2006) appeared admitting that it is not necessary to embed the entire innovative process under one organization's boundaries and that innovations could be done much faster and more effective by several independent market players cooperating through market contracts and in open-source environment. Large companies very often experience *not-invented-here* or *not-sold-here* syndromes which deprive them from the power of other people's ideas and potential. On the contrary, companies should make their innovations open to other companies and more actively use innovations of others to create higher value.

Of course, the company may be rewarded for its innovations only if it could capture some amount of the created value through selling its products or patents and licenses to other companies. This problem creates a challenge for the entrepreneurs and managers — to find organizational, marketing and contractual strategies which may help to capture some value from their innovations.

We may see that strictly speaking the theory of open innovations and the KBV of the firm are contradictory to each other because the latter demands for expanding and the former for contracting of organizational boundaries. But their arguments have *various implications for different integration dilemmas and in different technological structures*.

For example, if we talk about *horizontal integration*, then the KBV theory cannot provide any strong arguments for integration but the open innovation theory which holds that “not all smart people work here” admits that innovation process goes much faster if being organized between independent competing teams that inside one administrative organization. Disruptive innovations (Christensen 2003) cannot take place if the production

will be fully horizontally integrated because no rational firm will agree to disrupt its own business.

If we take *vertical* or *functional integration* the knowledge issue may play an important role in the choice of organizational form. Suppliers of various components or some managerial services (e. g. marketing or advertising) may need some specific knowledge about firm's operations but it does not mean that they should be always integrated with the firm. The choice depends on three factors: the codifiability of knowledge, the marketability of the intermediate product or service, and the necessity to stimulate innovativeness in the service providers. E.g. the development of a third generation of mobile systems was organized by Ericsson through distributed development scheme. The success of this scheme was founded on two elements — use of an “integration centric engineering process” to plan and coordinate independent teams of developers and using of a “global information system” for sharing the knowledge between project participants (Taxén 2006).

As we have seen from these examples the KBV theory and the open innovation theory serve as complementary arguments for the explanation of the boundaries of the firm and there comparative relevance depends on the technological characteristics of the industry.

CSR and stakeholders views

In 1950s the society began to think more and more often about the power of large corporations and its potential abuse. In 1953 Howard Bowen published the book *Social Responsibilities of the Businessmen* which expressed the idea that business is responsible before the society and should meet society's expectations about its activities. Hence the concept of corporate social responsibility (CSR) was born and became the topic of vast explorations in the next decades. In 1984 it was enhanced with the concept of stakeholders — “any group or individual who can affect, or is affected by, the achievement of a corporation's purpose” (Freeman, 1984). The CSR and stakeholder perspective was explored quite actively and one of intellectual products of these explorations was some new implications for the theory of the firm.

First, it was the fundamental idea that the management of the firm is responsible not only to owners (entrepreneurs) but to the whole society (all stakeholders). This means that we can talk about opportunistic behavior of the manager not only concerning the owners but *all other stakeholders who now may also be considers as the manager's principals*. Relationship between every stakeholder and the firm is actually a contract and there may be a lot of possibilities of opportunism in these contracts. E.g. the presence

of specific asset in one of these contracts may create vulnerability of that stakeholder or the firm. How to create the governance mechanism to remove this vulnerability?

One of the first answers to this new agenda was given by Oliver Williamson (1984) who suggested that this governance mechanism may be *bilateral safeguards system* (e.g. effective contract between the firm and the stakeholder) or *general safeguard system* (introduction of the stakeholder's representatives into the board of directors, e.g. employees or suppliers). This paper caused a reaction of the founder of stakeholder theory who published the paper (Freeman Evan 1990) developing this line of analysis and arguing that actually all stakeholders may have specific assets in relations with the firm and therefore should be invited to the board of directors to prevent opportunistic behavior of the firm. Accordingly, as Freeman and Evan wrote, it has sense to change the notion of the firm as nexus of contracts and replace it with a framework of "a series of multilateral contracts among stakeholders."

The similar thought was developed by Ruf et al. (2001) who tried to introduce the contract theory into the stakeholder analysis, arguing that "the firms that satisfy stakeholder demands or accurately signal their willingness to cooperate can often avoid higher costs that result from more formalized contractual compliance mechanisms (e.g. government regulation, union contracts)". Therefore, the *good CSR policies may reduce transaction costs* in contracting with various stakeholders.

However, this stakeholder view of the firm caused some skepticism among theoreticians who used to deal with a more rigor analysis. Jensen (2002) criticized the stakeholder view of the firm as non-productive because the responsibility of manager before many principals is much harder to measure than simple one-purpose wealth maximization.¹⁶ So, he proposed to use stakeholder theory only as "enlightened wealth maximization" where all relationships with stakeholders are important only as long-term drivers of firm's profitability.

Later attempts to find some additional generalizations (Kristoffersen, Gerrans, Clark-Murphy 2005) were not very productive.

In 2002 there was another development of stakeholder theory in the book of J. Post, L. Preston and S. Sachs who proposed a new theory of *extended corporation*. This concept was similar to the notion of extended family which includes the nuclear family (husband, wife and their children) plus all their more or less close relatives (spouses of children, cous-

¹⁶ Similarly, he totally dismissed the Balanced Scorecard approached as a descriptive analysis which does not allow assessing the quality of manager's job because there is no *score*.

ins, aunts, uncles, nieces, nephews etc.). In 1990s the similar term “extended enterprise” appeared in Chrysler Corporation, where it meant an alliance of the company and its suppliers exchanging with information and management practices. For Chrysler it was a forced move in the competitive pressure to cut costs. (Later the term became a synonym for “supply chain”.) Post, Preston and Sachs enlarged the concept of “extended enterprise” and included into it not only the suppliers but all internal and external stakeholders.¹⁷ The key idea was that the long-term survival and success of a firm is determined by its ability to establish and maintain relationships within its entire network of stakeholders. Therefore it is *relationships* rather than *transactions* that are the ultimate sources of organizational wealth. The latter idea — the organizational wealth — was another key concept in this framework embracing not only material assets and non-material know-how but also good relationships with stakeholders which may serve as a VRIN resource leading to competitive advantages.

What meaning does this theory have to our general theory of the firm? Actually, this stakeholder theory of the firm does not give as any new answers to basic questions of the theory of the firm — nature, size, structure — and in this sense it is not a theory of the firm at all. Nevertheless its basic idea — *relationships instead of contracts* — may have some important implications to our general theory of the firm. However, this idea was much better explored and developed by another discipline — relationship marketing — which will be discussed in next two sections.

Supply chain management

The contract theory (or transactional cost economics) which is a part of economic theory has two counterparts in the domain of management — *supply chain management* and *relationship marketing*. As other managerial disciplines these two have a clear practical purpose — to provide business people with procedures and instruments for making transactions with suppliers and customers efficient and effective. What are their relationships with the theory of the firm? We will talk about supply change management in this section and about relationship marketing in the next.

¹⁷ They even draw a new model of the corporation where all stakeholders were allocated in three concentric circles depending on the relative importance to the company: the inner circle *Resource Base* (employees, shareholders, creditors and cutomers), the middle circle *Industry Base* (partners and alliances, supply chain associates, regulatory authorities), and the external circle *Social Political Arena* (local communities, governments, private organizations). The extended corporation embraces all three circles.

As a practical activity the *supply chain management* (SCM) started to develop right with appearance of large scale production and assembly lines in early 20th century. But the term and its special emphasis were shaped in the 1980s when western companies were outperformed by some Asian counterparts and it became clear that the competition now was not just between individual firms but rather between entire supply chains. In 1990s it was even more intensified with globalization of supply chains and wide spread of outsourcing. But for long time the emphasis in SCM was on coordination and optimization problems and various managerial solutions for them. It was the domain of operations management which traditionally ignored behavioral issues which are central in the theory of the firm. Of course, this is a limitation, and eventually this fact was discovered by some activists of SCM community as well as people from the theory of the firm.

Interestingly, the problem of cooperation between two disciplines was outlined by the guru of transaction cost economics (Williamson 2008). He underlined that two disciplines studied mostly the same subject but the TCE was much more parsimonious, operationalizable, and predictive than SCM. The latter was positioned by its activists as a comprehensive discipline but actually this “comprehensiveness” reflects mostly methodological immaturity because a good theory should be simple, operationalizable and predictive (as is TCE). Although in this statement Williamson was basically correct his understanding of SCM was rather vague and his skepticism about its relevance was so clear that an offended and protesting response from SCM was followed immediately (Zipkin 2009).

Nevertheless, this confessional clash was rather unnecessary and unproductive because the SCM field already had started to incorporate some insights and frameworks from the TCE and other theories of the firm.

The first such suggestion was made as early as in 1999 by Skjoett-Larsen who proposed to build SCM on three different theoretical perspectives: *the transaction cost approach; the network perspective; and, the resource-based view*. In combination, these economic, sociological and strategic approaches can provide logistics researchers and managers with a strong conceptual framework for analyzing supply chain management in theory and practice (Skjoett-Larsen, 1999). The similar idea of basing SCM on several complementary approaches was articulated once more a few years later by Halldorsson, Kotzab and Skjoett-Larsen (2003).

In 2007, a year before Williamson’s paper, a special issue of *Journal of Operations Management* (vol. 25, issue 2) was devoted to the problems of integration of various organizational theories to SPM. These theories included all major paradigms in the organization theory: *the resource-based view, the knowledge-based view, strategic choice theory, agency theory, institutional theory, and systems theory*. And many contributors of this

journal issue made an attempt to incorporate the agency theory and transaction costs economics into supply chain analysis. As editors of this issue wrote (Ketchen, Hult 2007), “enormous opportunities exist to integrate insights from organization theory and supply chain management in order to build understanding of *why some supply chains excel while others do not*” (italics is mine). Another recent review of this topic is (Lavassani, Movahedi, Kumar, 2008).

Of course, although these suggestions to build SCM on various behavioural and organizational approaches were pronounced rather early the real implementation of this appeals may be still under question. We should look at modern textbooks on SCM to find out what steps have been actually made in this direction.

As we see SCM does not pretend to be a new theory of the firm but rather to incorporate main achievements of the latter to better understanding of their own issues. Nevertheless, the next discipline of the same managerial domain may pretend to be a distinctive approach for understanding the vertical integration theories domain and to add some new truth to the theory of the firm.

Relationship marketing

The *relationship marketing* is based on the assumption that it is very important to build and maintain efficient and effective system of relationships between the buyer and the seller which would allow creating the superior quality and benefiting from this partnering in the long run. This paradigm was developed to replace the *traditional marketing approach* (transactional or 4Ps approach) where all transactions were viewed as one-time bargains. Now pure market transactions are seen as only one end of a continuum of various types of relations, at the other end of which there is fully integrated firm. The whole range looks like: *pure market transactions, repeated transactions, long-term transactions, buyer-seller partnerships, strategic alliances, network organizations and vertical integration* (Webster, 1992).

As we may see this menu of options remind the alternative governance structures discussed by Williamson and the theory of the firm. Nevertheless, the focus of relationship marketing is not at the choice between of these alternatives (in this case it would a duplication of the theory of the firm). Instead of this, the relationship marketing supports one fundamental belief: *cooperation is better than competition*, and with cooperation the long-term contracts may be the best alternative to vertical integration or arm's length transactions.

This belief is based on the assumption that in the global economy with its enormous pressure to increase quality, reduce inventory, and develop

JIT, QR or VMI systems many firms have to choose single-sourcing instead of multiple sources of supply. This means the replacement of the competitive model to a cooperative one. If the rivalry between suppliers in the traditional competition model is used to reduce costs, in the new cooperative model “both parties achieve lower costs but working together to lower both buyer’s and seller’s costs” (Wilson, 1995). This becomes possible through eliminations of unnecessary tasks and procedures and introducing new efficient and effective management systems.

Therefore, the relationship marketing holds that the relational contracts is a highly valuable organizational form and tries to explore two basic questions: *When these cooperative contracts are possible? What factors influence their performance?* However, there is no uniformity in methods of analyzing these questions.

Many researchers use a *descriptive* or an *inductive* approach — they try to list all important variables which may influence performance of buyer-seller relationships and then to measure them in real business cases. Sheth (1996) suggests 10 important antecedents of effective supplier partnering: quality obsession, responsiveness, competence and professionalism, value engineering, mass customization, proactive innovation, frontline information systems, supplier focused teams, supplier involved marketing and supplier retention compensation. The IMP group uses the concept of *atmosphere* — a multidimensional construct including such variables as power, dependence, cooperation, expectations, closeness etc. — and tries to measure the atmosphere of buyer-seller relationships through ethnographic methods (Hakansson Wootz 1979). Another set of variables describing relationships was proposed by Wilson with colleagues (Wilson, Moller 1988; Han, Wilson 1993): commitment, trust, cooperation, mutual goals, interdependence, performance, comparison level of the alternative, adaptation, non-retrievable investments, shared technology, summative constructs, structural bonds, and social bonds. By measuring this set of variables they try to predict the future of relations — this is one of the theoretical assumptions of the authors. Another assumption is that these variables play different roles at different stages of relationships.

But some researchers use a more *deductive* approach and employ contract theory, organizational theory or some other paradigm to model the behavior of parties in buyer-seller relationships. What is important many of these authors assume that this is opportunistic behavior which prevents parties from efficient cooperation and it should be somehow removed to create conditions for efficient buyer-seller relationships. Achrol and Gundlach (1999) compare role of legal and cultural defenses preventing opportunism. Cannon, Achrol and Gundlach (2000) support the “plural form” thesis according to which a conjunction of legal and social mechanisms of

governance is needed for effective buyer-seller relations. Anderson and Weitz (1992) study the role of pledges as idiosyncratic investments and contractual terms preventing opportunistic behavior. Heide and Jonh (1992) try to show that the assumption about potential threat of opportunistic behavior in every contract is an exaggeration and many relationships are govern by norms. Dant and Schul (1992) use organizational behavior and political science to analyze how conflict resolution is done in relational contracts. Dwyer, Schurr and Oh (1987) use the metaphor of marriage when modeling the behavior of buyer and seller.

As we may see, the relationship marketing literature employs a multiple variety of approaches and models. But the main distinction of its approach is an attempt to justify long-term contractual relationships as a viable and efficient alternative to vertical integration or pure market transactions.

In the general theory of the firm it means that if the firm pays much attention to building mutual trust and common behavioral norms then it may effectively use long-term contracts where only vertical integration or competition among suppliers seemed to be possible.

As it was shown all mention above disciplines — sociological theories, resource-based view, knowledge-based view, dynamic capabilities approach, open innovations theory, stakeholder view, relationship marketing — can be productively used for analysis of the same question: *what are the effective organizational forms of the production space*. Nevertheless, they mostly do not represent alternatives to the general theory of firm as it was stated in the first two sections of this paper. They only underline one or another aspect of this general theory and focus on a deeper theoretical examination and empirical research of this aspect. That is why all these approaches may be named not as alternative theories of the firm but just extensions and interpretations of the one basic theory.

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