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TOWARDS AN UNDERSTANDING OF THE VARIETY OF FIRMS

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Currently more and more large, vertically integrated firms are being transformed into flatter organisations that encompass decentralised decision structures. The author argues that an understanding of this new type of firm, called market-like firm, is missing from the theory of the firm (transaction cost theory), for two reasons. On the one hand, the Williamsonian framework of governance structures does not explore the distinguishing mark of the firm, and, on the other hand, it cannot explain the variety of firms. To overcome these shortcomings, the author proposes the extension of the Williamsonian framework with the concept of "firm-ness" that is based on the distinction between ideal-type and real-type.

Keywords: firm, governance structures, ideal-type, authority

JEL classification index: D23, L22

INTRODUCTION: "NEW" ORGANISATIONAL FORMS?

Firms have been undergoing significant transformation in the knowledge economy. There is an ongoing process in which market-like elements such as high-powered incentives and entrepreneurship penetrate the firm (Zenger – Hesterley 1997). In fact, a disaggregation process, i.e. the transformation of Chandlerian vertically integrated corporations[1] is observable. We shall now briefly overview the major attributes of the organisational "outcome" of this process.

[1] Alfred Chandler's concern (1977) was about the emergence of the modern corporation through the lens of American business history. He has given a detailed report on how the multidivisional form evolved through time and became a dominant form in the 1960s. The modern business enterprise has three defining characteristics (Chandler 1990): (1) economies of scale and scope, (2) vertical integration, (3) emergence of salaried managers and absentee owners.

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The transformed organisation[2] encompasses flatter hierarchy, a decentralised decision structure built on self-organising, autonomous teams. The corporate centre takes advantage of the teams' entrepreneurship and responsibility; consequently, monitoring and authority are significantly constrained compared to those in the Chandlerian firm. Teams are organised cross-functionally around a well-defined task, observable output or project (Zenger 2002). Rather than measuring and evaluating the individuals' performance, these forms measure and reward the output of the teams. Inter-team relationships should be regarded as quasi-contractual, employees can be regarded as quasi-owners of the assets they use (Helper et al. 2000). Managers exercise guidance, manage conflict situations and enable communication among the teams rather than directly commanding and controlling them (Child – McGrath 2001). Many argue that these forms try to bring the market inside the firm.[3]

The most important differences between the Chandlerian corporation and the new model are the increased importance of human capital relative to inanimate assets and the break-up of vertical integration. Another major feature is the changing character of specialisation (Rajan – Zingales 2003). While the employees of the Chandlerian firm are technically specialised to the firm, those of the new firm have firm-specific[4] capabilities.

To sum it up, three kinds of change have been currently taking place regarding the nature of the firm (Foss 2001). First, authority relations are vanishing, or at least radically changing in character.[5] Second, boundaries of the firm are becoming vague; the ownership-based[6] understanding of firms' boundaries is becoming rather irrelevant (Helper et al. 2000). Third, co-ordinating mechanisms characteristic of the market (e.g. entrepreneurship, high-powered incentives, reward on performance, etc.) are used within the firm.

[2] There is a multitude of labels as regards these forms of organisation, for example modular organisation (Sanchez – Mahoney 1996), cellular firm (Miles et al. 1997), non-standard firm (Helper et al. 2000), federation (Day – Wendler 1998). The terminology is rather ambiguous: different labels are used for describing the same or similar things.

[3] Foss' (2000) case study on a Danish firm Oticon provides a good description of this. The Oticon's idea was to establish a spaghetti organisation with the explicit aim of emulating the market within the firm. The firm was organised totally on the initiatives of firm members: employees had a choice to decide which projects they would join. Project managers received a great amount of decision-making power and the right to negotiate salaries. Most hierarchical levels were eliminated with the aim of mimicking the market within the firm.

[4] Firm-specific specialisation is a specialisation to the idiosyncratic needs of the firm.

[5] Control over valuable human capital would seem to be a greater source of power than control over physical assets since almost all rights over it are residual, i.e., not allocable through contract (Rajan – Zingales 2003).

[6] The theory of property rights (Hart 1995) defines the boundaries of the firm on the basis of the assets owned by the firm.

The issue of these forms of organisation is extensively discussed in management literature; numerous empirical studies were published in the 90s on the subject.[7] In addition, a new label has also been introduced in the literature in order to distinguish these organisations from large, multidivisional ones that have dominated over the last 40 years. As a reference to this type of organisation, Daft and Lewin (1993) introduced the term "new organisational form" a decade ago. The two authors did not define the concept clearly, they simply spoke of the transformation of the firms in the knowledge economy and lamented not having a theory regarding the emergent organisational forms. However, whether the need for a separate theory is justified for the explanation of these forms of organisation is strongly doubtful.

In my view, there are serious conceptual problems regarding the term "new organisational form". On the one hand, we do not have a single, clear-cut definition of organisational form (Romanelli 1991) which, however, would be needed to decide whether changes are taking place within a known form, or a completely new organisational form is emerging. Without an unambiguous definition of organisational form it is quite problematic to speak of "new organisational forms" as such. On the other hand, even if we accept any kind of definition of organisational form according to which the above-mentioned forms should not be considered as new ones, but rather as variants within a given group of organisational form, we would need a theory to explain this variety. These two problems are, of course, intertwined.

The aim of this paper is to contribute to a theoretical understanding of these forms of organisations.[8] My argument is that – while it is hardly questionable that some changes are taking place within the firm – these organisations should not be regarded as new organisational forms, instead, they are representatives of an (already) existing organisational form, namely the firm. Consequently, we do not need a new theory to explain them: it is the theory of the firm that must integrate an understanding of these forms. For this explanation, I will extend the Williamsonian theory of governance structures, which I consider a simple, but brilliant framework for an understanding of organisational forms.

This study is organised as follows. In Section 1 the theoretical background, i.e. the Williamsonian theory is presented and an argument in favour of the extension

7 The leading journals devoted special issues to the problems of these organisations. See: *Academy of Management Journal* 2001/6, *Organization Science* 1996/4 and 1999/5.

8 Foss (2001) seems to be in accordance with my view. The author puts forward three reasons why the understanding of these forms is an important challenge: (1) It concerns important and real phenomenon. (2) It pushes us to rethink some "classic" issues in the theory of the firm. (3) Existing approaches, such as transaction cost economics, are not capable of providing an adequate explanation for these.

of the theory is given. In Section 2 the idea of applying the Weberian concept of ideal-type is introduced together with the concept of real-types to overcome the major problem that resides in the Williamsonian framework. Based on these concepts, it is argued that three real-types of the firm (the U-form, the M-form, and the market-like firm) must be distinguished. The issue of what is common in these forms, i.e. what the distinctive mark of the firm is, will be discussed in Section 3. In Section 4 the question of why numerous real-types of the firm coexist is addressed. Having analysed the above issues, the question of what limits the use of high-powered incentives within the firm is raised and discussed in Section 5. Section 6 summarises the author's main propositions.

1. THE WILLIAMSONIAN FRAMEWORK

Williamson's (1985) theory of governance structures is widely accepted as a framework for a classification of the organisational forms.[9] Williamson distinguishes three types of governance structures, namely market, firm and hybrid form.[10] All these forms may have transaction cost advantage over the others depending on the characteristics of a transaction. He identifies three dimensions of transactions which dictate whether markets, hybrids or firms are more efficient: uncertainty, asset specificity, frequency. These dimensions affect the transaction costs. Accordingly, this theory serves as a main guideline in the understanding of why different institutions emerge for coordinating transactions.

This trichotomous view was further elaborated in Williamson (1991). Here he discusses the key attributes with respect to which governance structures differ from each other. Thus, he indicates that (1) contract law, (2) performance attributes, and (3) instruments constitute the three criteria for stressing the differences between the forms.

[9] Although there is a lack of clarity and agreement in definition of the concept of organisational form, recently Knudsen and Eriksen (2002: 10) put forward a working definition: An organisational form as an n-member architecture is "a collection of members, a collection of channels through which the members can pass information and control to each other, and a set of dynamic rules that help to define the flow of information or control and thus help define their decision rights". According to this definition, organisational forms should be distinguished based on the allocation of decision rights. Because of the shortage of space I cannot go into details as regards the slight differences between the Williamsonian term of governance structure and that of the organisational form. Here I take the two as synonyms.

[10] Hybrid forms are various forms of long-term contracting between autonomous firms, such as licensing, franchising, supplier chains, strategic alliances, etc.

Williamson puts forth that each generic form of governance – market, firm, hybrid – needs to be supported by a different form of contract law. According to him, there is a one-to-one correspondence between them, i.e., classical law applies to "thick" markets, neo-classical contract law is ideal for hybrid forms, and the (implicit) contract law that supports firms is that of forbearance.

Besides the type of contract law, there are crucial differences between forms in adaptability. The issue of adaptability refers to the economic problem identified by Hayek: "the economic problem of society is mainly one of rapid adaptation in the particular circumstances of time and place" (1945: 254). Hayek argues that the price system (market) has enormous advantage over central planning for inducing change. In other words, Hayek speaks of an adaptive capacity in the market. On the contrary, Barnard (1938) – who also holds that the main problem of organisation is that of adaptation – locates the adaptive capacity within the organisation. Williamson argues that both scholars are correct, but they refer to different kinds of adaptation that are needed for a high performance. The adaptation that takes place within the firm is referred to as cooperation (adaptation C), the adaptation assured in markets is called autonomous adaptation (adaptation A).

The third distinguishing attribute refers to the type of incentive and control instruments used in a given governance form. In markets high-powered incentives are used (Williamson 1988), while internal organisation degrades incentive intensity. Besides this, administrative controls develop in the opposite way: hierarchy is infused with an intensive use of administrative instruments. The *table below* summarises the distinguishing attributes of market, firm, and hybrid.

Distinguishing attributes of market, hybrid, and hierarchy governance structures

	Governance Structure		
Attributes	Market	Hybrid	Hierarchy
Instruments			
Incentive intensity	++	+	0
Administrative control	0	+	++
Performance attributes			
Adaptation (A)	++	+	0
Adaptation (C)	0	+	++
Contract law	++	+	0

++ = strong, + = semi-strong, 0 = weak.
Source: Williamson (1991: 281).

As it is shown in the table, markets and hierarchies (firms) are polar opposites, and hybrids are in between, displaying intermediate values in all five features:

"the hybrid mode is characterised with semi-strong incentives, an intermediate degree of administrative controls, displays semi-strong adaptations of both kinds, and works out a semi-legalistic contract law regime" (Williamson 1991: 281).

Although this scheme is very simple, it is particularly useful for understanding the major differences between modes of coordination. Nevertheless, something seems to be problematic with this framework. While Williamson (1991: 280) himself talks about the variety as regards hybrid forms, he is silent on the same topic as regards market and hierarchy. However, this question should also be explored. The fact that hybrids exist in many various forms stems directly from the fact that hybrids exhibit intermediate values in all characteristics, i.e., they combine the features of markets and firms. This combination, of course, can be of numerous types.[11]

Of great importance for my original concern, market and hierarchy are presented in the Williamsonian framework as being homogeneous, or at least the variety of firms (and markets) is only implicitly acknowledged. This is the very reason why one is in trouble when considering the so called "new organisational forms". If firms are associated only with (1) low-powered incentives (Williamson 1991: 275), (2) administrative controls, and (3) cooperative type of adaptation – as shown in the *table above* –, how to consider the described forms that use also high-powered incentives, a moderate degree of administrative control and autonomous adaptation? Are they firms or something new? Or, to put it another way: are we witnessing a process in which the essence of an institution known as "firm" radically changes and/or something "new" is emerging, or does the essence of the "firm" remain the same and may the "new organisational forms" be regarded as mutants of the "firm"?

My argument is that the nature of the "firm" has not changed, therefore the "new forms" should be conceived as the newest mutants of the firm, just as the multidivisional form should have been regarded as a mutant at its time of emergence. If this is the case, however, such a theory of the firm is needed that can explain mutant forms as well.

Moreover, the Williamsonian framework is appropriate, but it needs to be extended to incorporate the diversity of firms (and markets) as well. The concepts of ideal-type and real-type may serve as a starting point in this theoretical extension. This will contribute to a better understanding of the criteria on the basis of which the three governance modes must be distinguished.

[11] For a detailed overview of the types of hybrids see Ménard (2002).

2. IDEAL-TYPE *VERSUS* REAL-TYPE

In my concern, there is a serious misunderstanding when speaking of "new organisational forms": one of the real-types of the firm is taken as an ideal-type.[12] Let me clarify what I mean by this.

In economics, just as in social sciences in general, ideal-types are needed in a theory.[13] Ideal-types are the abstract descriptions of the phenomenon to be explained, they are useful and substantial categories for theoretical understanding (Hodgson 1998), they serve as a basis for a conceptual distinction between things. As an ideal-type is a social scientific construction that culls elements found in the social world and assembles them in a pure, internally consistent form, they are pure concepts shaped by the interest of the creator. As a consequence, the ideal-type accentuates aspects of reality in a one-sided way.[14]

By comparing an ideal-type to a particular case, it is possible to judge the extent to which the elements emphasised in the ideal-type occur in reality. I refer to the concrete types of a given thing as real-types. To put it differently, ideal-types are pure forms, as opposed to this, real-types are mixtures of ideal-types. This means that real-types exhibit the characteristics of numerous ideal-types to a varying degree. The essence of the concept of ideal-type is to accentuate the difference between things, as opposed to this the essence of that of real-type is to draw attention to the fact that things differ from one another while being categorised the same by nature.

When thinking of the modes of coordinating transactions it becomes clear that market, hybrid and firm are ideal-types. As discussed above, ideal-types enable researchers to differentiate between things on a theoretical basis. This implies focusing on the distinctive, i.e. *sine qua non* attributes of things. The view that firm and market are different coordination mechanisms is common in the literature and goes back to Coase's (1937) dichotomy. Whether hybrid structure should also be considered an ideal-type is a more delicate question since many misunderstand the

12 In general terms Hodgson (1998: 242) has referred to this as follows: "Above all it is important not to confuse conceptual model with real-world muddle. … In order to describe such a muddled reality we need clear ideal-types to guide us. Without them we are conceptually blind. Clear and unmuddled concepts are necessary to penetrate a muddled world".

13 Max Weber (1956) was the most prominent scholar who explored the notion of ideal-type. For Weber the ultimate goal of social science is to understand reality, and ideal-type fits within this larger conception of the goal of social science (Dhananjai 1996). Weberian ideal-types are theoretical constructs that model certain aspects of social reality and help us to understand social phenomena. They are obtained by a process of abstraction. Boettke (1997: 23) referred to it as follows: "An ideal type is neither intended to describe reality nor to indict it. It is instead a theoretical construct intended to illuminate certain thing that might occur in reality."

14 "When we use an ideal-type we stand at a distance from a reality" (Lachmann 1970: 27).

nature of the hybrid form. It is important to note that the hybrid form is not simply a compromise between market and firm which should be regarded as a mixture of these two, instead, it is "neither market, nor firm" (Powell 1990: title of the article), i.e. it is a form in its own right.[15] This is to say that the hybrid form has its own distinctive features, just like the firm and market.[16]

To conclude, the firm, the market and the hybrid (with their own distinctive marks) are ideal-types as regards the transaction coordination. However, we can observe the manifestation of numerous real-types in each of these ideal-types. The identification and analysis of the real-types of the market and of the hybrid is beyond the scope of this paper, which concentrates on the firm only.

Regarding the firm,[17] three real-types may be distinguished, namely the U-form, the M-form and the so-called "new organisational forms" that I propose to refer to as market-like firm. As being real-types, they combine the characteristics of the firm, of the market and the hybrid to various degrees. Since real-types differ from one another to some extent while being also the same thing by nature, the characteristics of a "firm" as an ideal-type manifest themselves only to certain extent in the U- and M-form, and the market-like firm. The differences between these real-types stem exactly from the fact that some elements of the "market" and of the "hybrid" (as ideal-types) are also present in each. That is why I argue that the real-types of a "firm" are mixtures of all ideal-types of transaction coordination. To put it differently, real-types are the mutants (variations) of an ideal-type (Kapás 2003).

This being said let me explore the shortcomings of the Williamsonian framework. On Williamson's account there are three different kinds of governance structures, i.e. three ideal-types. Moreover, the issue of the distinctive features of these forms is not (explicitly) addressed in his theory: he does not explore which of the five attributes (see the *table* on page 47) has to be seen as a distinctive one.

Moreover, Williamson fails to discuss the extent to which the characteristics of the "firm" occur in reality. Although he does make efforts to distinguish the U- and the M-form (Williamson 1981), he does not genuinely take into account the variety of firms. The M-form is seen by Williamson as a form of a modern, 20th century organisation that "is mainly to be understood as the product of a series of organisational innovations that have had the purpose and effect of economising on transaction costs" (*ibid.:* 1537). When speaking of it, he considers the centralised, functionally departmentalised or unitary (U-form) structure as the reference type

15 This view is also supported by Williamson (1991), Ménard (1995: 176) and Bradach – Eccles (1989).

16 The issue of what exactly the distinctive attributes of the firm, of the market and the hybrid structure are, will be discussed at greater length below.

17 I shll use "firm" when speaking of the firm in the meaning of ideal-type.

of organisation. Williamson argues that the M-form represents a solution to the coupling problem different from that of the U-form. These views might suggest that Williamson takes the question of variety of firms seriously by distinguishing two types. As opposed to this, elsewhere (Williamson 1985) he seems to consider the M-firm identical with the "firm". When referring to the "firm", it is the M-form that he has in mind.[18] It is problematic that there is a confusion here concerning ideal and real-types, which hampers the understanding of both the "firm" and the M-form. Both above-discussed problems are related to the issue of what distinguishing feature of the "firm" is, indeed, common in all firm real-types.

3. WHAT MAKES THE FIRM A "FIRM"?

An understanding of the essence of a "firm" as ideal-type requires the identification of the unique attributes of a "firm", i.e. those that exclusively characterise it. However, this is rather unclear and implicit in the literature. Coase was the first to discuss this issue. He argues that "the distinguishing mark of the firm is the suppression of the price mechanism" (Coase 1937: 389). In the same paper, he also sees the employee–employer relationship, i.e. the authority relation as the main feature of the "firm". However, the two things Coase referred to are clearly not the same. As regards Coase's first insight, many argue (Langlois – Foss 1999, among others) that he was wrong when considering the suppression of the price system as the distinguishing feature of the firm, supporting their counterargument with two major facts. First, using transfer (shadow) prices between divisions aims to imitate market prices within the firm.[19] Second, profit centres (divisions) must be thought of as semi-autonomous centres organised along product, brand or geographic lines, among which a miniature (internal) capital market operates (Williamson 1981).

At this point it is not clear what makes the firm a "firm". Coase's second insight, as mentioned earlier, refers to the authority relation as the essential characteristic of the firm. This seems to be more accurate at first, but what exactly is meant by authority? Coase (1937) himself does not give a clear-cut definition, but refers only to the relationship between the employee and employer (entrepreneur).

18 This claim may be supported by the fact that Williamson is mainly concerned with the issue of why transactions are organised within the firm. This implies that he focuses on the question of vertical integration, which leads, as we know it from Chandler (1977), to the multidivisional form.

19 Note that transfer prices are not (true) market prices and their use serves, partly, other purposes than ensuring efficient resource allocation. Nevertheless, they are much more similar to market prices than to commands used exclusively by firms.

According to him, the entrepreneur exercises direction, and employees agree to obey him within certain limits (*ibid.:* 391). This concept of authority was formalised by Simon (1952).

Let A be the set of the worker's possible behaviours. The employer is permitted by a worker to select actions, $A^0 \subset A$. More or less authority is then defined as making the set A^0 larger or smaller. In this view of authority the action space is well-defined and known both to the employer and the worker. The boss has the right to direct the worker, and the worker obeys the instructions within his "zone of acceptance". Foss (2002) argues that the Coasean–Simonian view of authority is too narrow "because it implies that the boss directs the worker's actions in detail, based on a complete knowledge of the worker's action set, and because it implicitly asserts that the boss is always at least as, or more knowledgeable about what actions should optimally be carried out" (Foss 2002: 19). Consequently, the concept of authority has to be extended. A broader concept of authority takes into account the fact that decision rights are delegated in firms, and their use is monitored (Jensen – Meckling 1992). On this basis, authority is taken as direction and centralised decision-making, which does not necessarily require detailed knowledge about a subordinate's mindset, skills or available actions (Foss 2002).

This being said the question arises whether authority (in a broader sense) is a distinguishing mark of a firm. The answer is yes and no at the same time: it is not the use of authority itself that distinguishes a "firm" as a pure form (ideal-type) from markets and hybrids, since markets and, especially, hybrids are also infused with a certain level of authority.[20] Nevertheless, authority is the major device for coordination within firms. Similarly, the distinctive feature of a market and that of a hybrid must also be made explicit. A market is an institution that is characterised by using price system as a predominant mechanism for coordination. As regards the hybrid form, its distinctive attribute is related to the long-standing character of inter-firm relations in which coordinating mechanisms such as reciprocity, trust, and collaboration play the major role.[21]

In summary, firms, markets and hybrids are distinctive forms with their own logic and procedures (Powell 1990: 327); they are ideal-types for coordinating transactions. The distinguishing feature of the "firm" is the predominance of authority among coordinating devices used within the firm. Thus, the "firm" prevails in numerous real-types, namely the U-form, the M-form and the market-like firm,

[20] Many scholars argue and provide evidence for the fact that a kind of authority is observable in hybrids (Ménard 2002).

[21] While different authors take different views as regards the hybrid's distinctive mark, the differences are not so important, if there is any at all. Powell (1990) sees reciprocity as the major feature of it, Adler (2001) and Granovetter (1995) do the trust. More detailed investigation of this issue is beyond the scope of my present interest.

which differ from one another in the proportions in which the different coordinating mechanisms are combined. Coordinating mechanisms predominating in markets (e.g. high-powered incentives, entrepreneurship, etc.) are present to a greater extent in market-like firms than in the U- or M-forms. To put it differently, various real-types of the "firm" exhibit a varying degree of "firm-ness".

The concept of "firm-ness" is used here to refer to the extent to which the attributes that are more characteristic of the market than of the firm occur within the firm. Although real-types of the 'firm' exhibit different degrees of "firm-ness" due to combining various coordination mechanisms in different proportions, the same authority mechanism predominates in each real-type. This is the very reason why they all must be considered firms.

The issue of the variety of firms needs also be tackled. The question of variety should be analysed on two distinct levels. First, there is a variety in terms of real-types of the "firm". The "firm" encompasses a wide range of concrete types of firms from traditional hierarchical firms (U-form) through the multidivisional firms to the market-like firms of the new economy. The point is that "although the Coasian firm will undergo changes, … it will persist in its basic constitution" (Foss 2001: 9). Second, diversity also exists within each real-type. For instance, as regards the above-described market-like firms, there exists a wide array of forms: some of them radically break with the traditional hierarchy (such as the cellular form or spaghetti organisation), while others introduce only some new mechanisms (such as reward by performance, or empowerment) and yet retain the traditional form (Foss 2002). This is also the case as regards the M-form. The M-form described by Chandler (1977) has gone through a transformation to arrive at the multinational corporation form of the 21st century that differs in many respects from those of the early ages.[22]

Following from this, two major issues must be investigated. On the one hand, we must examine the reasons for the existing diversity of the real-types of the "firm", trying to find an explanation for why these three real-types coexist in the economy. On the other hand, we must provide an answer to the question why a firm does not transform into market once more and more market-like attributes penetrate it. Below I am going to provide answers to these questions respectively.

4. WHY THE VARIETY?

It follows from the above that there is a relatively large range within which coordinating mechanisms other than authority may be used inside the firm. Why is this so? Why is it that numerous real-types of the "firm" exist?

22 Bartlett and Ghoshal (1993) gives an account of the global corporation.

As shown above, the firm exists in multiple concrete forms as regards its internal structure. The centralised hierarchy (U-form) is often taken as a basic form of the firm. Compared to this, multidivisional and market-like firms should be considered mutants. However, all three real-types of the "firm" must be regarded as efficient solutions to the economic problem of their own age. As a result none of them has a supremacy over the others. Both the multidivisional form and the market-like firm have brought significant added value compared to the previous forms, and they must be seen as suitable responses to the requirements of their age. We must agree with the claim of Miles et al. (1997) according to which cellular forms (market-like firms) are advantageous only in cases when they deal with products requiring rapid innovation. For those firms that produce standard products the hierarchical form continues to be more advantageous. That is, market-like firms are best suited to the requirements of the knowledge economy, and they are basically present in knowledge-intensive industries such as the biotechnology and semiconductor industries. However, centralised hierarchies or M-forms continue to prosper in the traditional physical capital-intensive industries. Nowadays decentralised structures have become predominant only to the extent that knowledge-intensive industries have gained ground in the economy.

The evolution of real-types of the "firm" does not take place in a way that with the emergence of a new form the older ones disappear. On the contrary, the new real-type always retains the older ones. With the birth of the M-form the U-form has not disappeared. Similarly, after the emergence of market-like firms the U- and M-forms continue to prosper in some industries. Novel real-types have always emerged as a result of an efficient answer to some significant economic change. Since those circumstances in which the new real-type has a comparative advantage never predominate in the whole economy, the older forms continue to be advantageous for the firms that operate in an unchanged environment. This is the very reason why firms exhibiting different degrees of "firm-ness" coexist. This reflects the fact that different real-types of the "firm" have a comparative advantage in different given situations.

This argument is closely related to the issue of institutional matrix. No doubt that the particular elements of the society's web of institutions change at a different rate. This evolutionary process leads to an economy in which the change is continuous, but the level of the change in any particular sector is a matter of degree. Under these circumstances institutional pluralism, i.e. a variety of firms may be a viable solution to any economic system: it contributes to overcoming the limitations inherent in any particular sub-institutional setting.

It would be erroneous to overestimate the importance of market-like firms; their emergence and proliferation should rather be regarded as a result of the same process that led to the emergence and spread of the multidivisional form. Consequently, the tendency itself is not a new one: the changing character of the economy requires changes in the real-types of the "firm". So the new real-type is inevitably a mutant with regard to the previous ones. In this perspective, it is clear that real-types of the "firm" exhibiting different degrees of "firm-ness" are not rival forms since they fit into different environments.[23]

5. WHY DO MARKET-LIKE FIRMS NOT TRANSFORM INTO MARKETS?

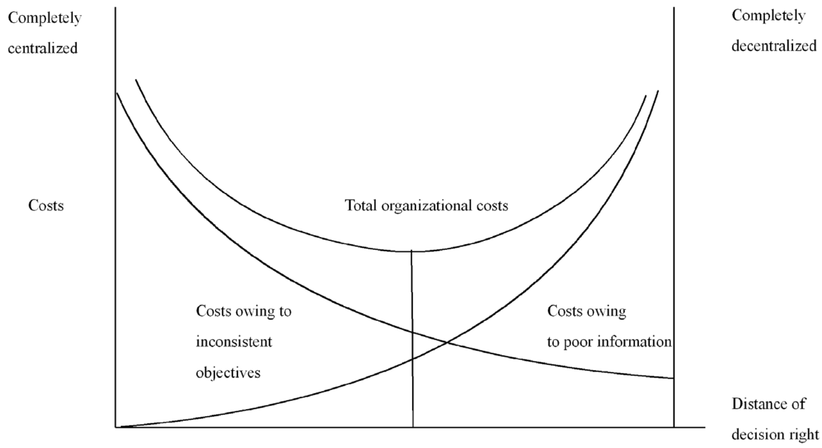
This section highlights that the application of coordinating devices other than authority is limited within the firm. Surpassing a certain limit, the firm would cease to be a firm and would transform into market or hybrid. The following paragraphs investigate the factors limiting the penetration of market-like coordinating devices into the firm.

First of all, there are costs associated with the decrease of formal authority.[24] When market-like incentives gain ground *vis-à-vis* firm-like ones, the decrease in the degree of the "firm-ness" of the firm involves costs. These are due to inferior authority such as agency costs, constraining the degree to which the firm can become market-like. Decision rights must be delegated in a way that the advantages from delegation – which result from a better use of local knowledge – counterbalance the costs of delegation, i.e. losses from agency (Jensen – Meckling 1992). Since we assume that the agency costs increase monotonically, and the costs owing to poor knowledge decrease monotonically as more formal authority is allocated to the subordinates, there exists an optimal decentralisation of decision right (formal authority). Due to the shapes of these costs curves the optimum cannot be at a point where decision rights are completely decentralised. This argumentation is illustrated by the *figure below*.

Note that even in the case of delegation of formal authority, top management reserves ultimate decision rights. Williamson (1996: 150) identifies this problem with the impossibility of selective intervention. Selective intervention refers to the promise of managers to intervene into the affairs delegated to the employees only

23 Here it is important to note that the market competition allows a selection among rivals.

24 Aghion and Tirole (1997) distinguish between formal and real authority. Formal authority gives the owner of an asset the right to make decisions concerning the use of this asset. This formal authority, however, does not necessarily mean real authority, that is, effective control over decisions. The fact that formal and real authority may be separated within firms is easily understandable: when a principal is overloaded with too many activities under her formal authority she involuntarily loses effective control. Therefore the separation between formal and real authority is common within the firms. When subordinates have real authority without having formal one, the allocation of real authority is involuntary. It follows that the voluntary delegation of decision rights concerns formal authority.



Source: Jensen – Meckling (1992: 263).

The trade-off between costs owing to inconsistent objectives and costs owing to poor information

when processes go in an unfavourable way. Williamson argues that selective intervention is impossible and the promise of the manager to overrule the employee's decision only in undesirable situations is not credible because these promises are unenforceable. The employees do not become owners in market-like firms, although some kind of quasi-ownership system is stimulated. To put it differently, the employees do not possess ultimate decision rights. The person having the ultimate decision rights can always control and overrule employees.

This implies, as Foss (2001) argues, that centralised coordination is a necessary constituent of firms. It is possible to provide an efficiency-grounded explanation for authority if it is taken as direction and centralised decision-making.[25] Since the predominance of authority is a distinctive attribute of a firm, and even market-like firms need a certain degree of authority, firms cannot be infused so much with the elements of the market that they transform into markets.

[25] According to Foss (2001), the reasons why authority is needed are as follows: (1) *The need for urgent coordination.* In many cases it is better to do something than nothing. In such cases, the ultimate decision rights must be allocated to anybody. (2) *Decisive information.* Information is decisive if a decision can be made only on the basis of this information irrespectively of the others (Casson 1994). The decisiveness of information and the fact that this information can be communicated only with high costs may explain the allocation of the decision rights and the authority. (3) *Economies of scale in decision-making.* (4) *Economies of scale in monitoring.* Because of the complexity of the control problem, managers use multiple incentive instruments. Economies of scale may dictate that this activity be centralised.

Modularity also limits the extent to which market mechanisms can decrease the degree of "firm-ness" of the firm. At a more abstract level, modularity refers to the degree to which a system's components can be separated and recombined without a significant loss of functionality (Schilling 2000: 315).[26] Since all systems exhibit some degree of modularity, the question to be raised is not whether a system is modular, but rather to what degree it is modular.

Modularity, a general system concept, has been a research topic reviewed in the literature on organisations for the last 15 years. In this literature product modularity is regarded as the central element, the most significant research topics being why firms produce modular products and related organisational issues. Nevertheless, more recently modularity theory has been applied to social organisations as well. As Langlois (2002: 34) argues, a market is a most modular organisation, while "firms arise as islands of non-modularity in a sea of modularity". Considering the previous line of argument, this implies that the market exhibits a much higher degree of modularity than the firm does. Increased modularity in the knowledge economy refers not only to products, but also to disintegrated hierarchies. Market-like firms must be regarded as an evidence for this. In other words, market-like firms infuse modularity into the firm that is basically non-modularly structured. Accordingly, contemporary tendencies incorporate the transformation of tightly integrated systems (vertically integrated firms) into loosely coupled disaggregated structures (market-like firms).

Accepting the insight that the firm may have supremacy over the market in the coordination of given transactions (Langlois – Robertson 1995) implies that modularity is constrained inside the firm. The functionality of the firm's components is independent from one another only to a given extent. Therefore, the firm may be decomposed only to the extent which makes the accomplishment of the firm's function possible. The firm's components are synergistically specific to one another (Schilling 2000); that is, the firm as a whole can perform better than its decomposed parts. Because of the synergistic specificity the firm cannot become as modular as the market.

Besides the above, another relevant issue constraining modularity is the question of an appropriate interface. Increased modularity requires the use of a better interface in order to coordinate the modules.[27] However, while the price-system functions as the standard interface of the market (Baldwin – Clark 1997), there is no standard interface within the firm that can co-ordinate the modules effectively and at low cost. Finding an appropriate interface within the firm is always problematic.

26 The components of a modular system are relatively independent from one another and they are easily combinable with the other ones (Baldwin – Clark 1997).

27 Interfaces enable interactions among the modules and describe in detail how the modules will interact, including how they will fit together and communicate (Baldwin – Clark 1997).

The above three arguments – increasing agency costs, necessity of centralised coordination inside the firm, and the constraints of modularity – point to the fact that the decrease in the degree of the firm's "firm-ness" is limited.

6. CONCLUSIONS

The integration of market-like firm, the type of organisation emergent in the knowledge economy, into the theory of the firm constitutes the greatest present-day challenge for economists of this field. The issue is imperative because the theory of the firm must provide an explanation for the firm as such rather than only for a given type of a firm like the M-form, which has, indeed, been developed in transaction cost theory the dominant theory of the firm. The Williamsonian framework of governance structures is useful for understanding what the major differences between coordinating modes are. However, it fails to explore the distinguishing marks of the firm on the one hand and the variety of the firm on the other. To overcome these shortcomings the present study has proposed an extension of the Williamsonian framework introducing the concept of "firm-ness".

"Firm-ness" is based on the distinguishing attribute of a firm: the predominance of authority among the coordinating devices used inside the firm. All real-types of the 'firm', namely the U-form, the M-form and the market-like firm must be conceived as comprising the characteristics of the three ideal-types of governance structures (firm, market and hybrid), but, to a varying degree. Coordinating devices that predominate either in markets (the price system), or in hybrids (trust) occur in the real-types of the firm (U-, M-forms and market-like firm) to a certain, varied extent. "Firm-ness" refers to the degree to which these coordinating devices operate within a given real-type. Market-like firms exhibit the lowest level of "firm-ness", the U-form displays the greatest, and the M-form is between the former two.[28] An advantage of the concept of "firm-ness" is that one can explain why numerous real-types exist and coexist.

28 The degree of the "firm-ness" is related to the transaction cost issue. Following Alston and Gillespie (1989) we can distinguish between transaction costs of using the market and those of using the firm. When more and more high-powered incentives are used inside the firm, the transaction costs of using the firm, i.e., agency, coordination, and shirking, and contract enforcement costs become larger. This means that these transaction costs are much higher in the market-like firms than in the M-form, and the transaction costs of using the market evolve in the opposite way. Accordingly, when a new real-type of the 'firm' emerges, the boundary between the two types of transaction costs shifts. This implies that the change in transaction costs was not large enough to warrant a new ideal-type, but, it was enough to give birth to a new real-type.

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