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Use of coordination fields in food economics

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**„Institutions in Transition –
Challenges for New Modes of Governance”**

IAMO Forum 2010, 16-18 June 2010 | Halle (Saale), Germany

USE OF COORDINATION FIELDS IN FOOD ECONOMICS*

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ABSTRACT

The coordination plays central role in the economics. The conventional economic theory looks at the market and enterprise (or hierarchy) as two different, separated manner of coordination of economic goods and services. However the modern organization theory, price theory and institutional economics show that different types (not only market and enterprise, but also several types of hybrid forms) of coordination (or governance structure) necessarily live together in the current economic system.

Based on my previous research on the field of regional clusters in the food industry I came to the conclusion that the cluster is one of the spheres where economic coordination can occur. At the same time I pointed out that the ways of coordination can be ordered on an ordinary scale according to its normative or positive nature.

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I've also found that the choice between the coordination spheres (market, enterprise or cluster) is not arbitrary, but instead depends on the interest's dimension which is represented by the exchange of goods and services in question.

Keywords: exchange, coordination, institutions, governance structure

JEL: A11, D01, D02, L14

INTRODUCTION

The question of economic coordination became widely debated issue among economic theorists (*Kornai, 1983, Williamson, 2002*). These approaches “are all alike in their acceptance of organizations as entities to be analyzed in order to understand the allocation, coordination, and creation of resources” (*Ménard, 1996*).

The analysis of food industry's clusters in Hungary has guided me to recognition that in these clusters the most important object of economic exchange is the information among cluster members. If the information is matter of supply and demand, what factors and in which way of mechanism determine the equilibrium on that specific exchange? – it was the question, I tried to clarify in this paper.

1. REGIONAL CLUSTERS AND COORDINATION

It is an important fact of cluster analysis that geographical concentration advantages in a given area cannot, or can only rarely be, identified entirely. A cluster cannot therefore be broken down into enterprises, as in a wider sense all of them share in the given advantages as part of the cluster. It follows that the expression ‘regional cluster’ is an abstraction, as definite geographical borders of the cluster may not be known. However, in order to deal more deeply with this issue we need a notion of a cluster as a form of cooperation which solely incorporates just those obviously sharing some geographical advantage.

There exists no definable common activity among enterprises working in the same agglomeration area in the absence of special relationships.

Those identifiable external effects and interactions belong to the definition of clusters:

- A locally qualified workforce available
- A concentrated presence of suppliers
- Vertical relationships among members of a cluster
- Intensive information exchange between enterprises and institutions
- Diversified institutions and infrastructure endorsing specialized activities of a cluster
- Trust and common sense of socio-cultural identity among members based on the same values.

In a cluster, among the complex set of interactions, emphasis is rather based on 'soft', non-measurable factors like trust, creative ability and knowledge 'spill-over'. Therefore a precise cluster definition based on which sharp line of demarcation could be drawn between pure agglomerations and complex clusters is not possible. Commonalities of different cluster-aspects, nevertheless, may be given:

- Some permanent cooperation is observable between enterprises
- Enterprises share their resources with each other
- Enterprises create intensive relationships with local institutions
- Cooperating enterprises and institutions are concentrated geographically

Nonetheless, clusters also can be interpreted from the enterprise theory point of view, by which we get closer to an exploration of factors for economic success and competitiveness and thereby to a demonstration of the development possibilities for competitiveness positions based on management of clusters. The market, the enterprise, and in addition, the cluster, is a scene of change transaction. In order to use change to explain the market, the enterprise and the cluster in the same way, the definition should be general enough. Accordingly, "change transaction is a transfer between actors, in which one party allocates some goods, information or knowledge to the other party, which the other party has not had before, and by which this latter can obtain advantages" (*Kapás, 2002*).

In a cluster, the object of change transaction is typically information or (special) knowledge. Information and knowledge change has the extraordinary specialty – due to frequency of changes in relationships – of being mostly random, but the intensity of the relationship guarantees its materialization.

A cluster then – similarly to a market or an enterprise – is a coordination field of change (mainly of information and knowledge) and is not a coordination mechanism of its own but rather the place of its materialization. Therefore, systematization of the mechanisms coordinating the exchange (even in the field of clusters) is needed.

2. ECONOMIC COORDINATION IN DIFFERENT FIELDS

We can define “change-transactions” as transfers of goods or services across a technologically separable interface (*Williamson, 1985*). If we have a deeper knowledge about the attributes of these transfers, we can come closer to understand, why a transaction will be ruled by one form of governance rather than other.

We know from transaction economics, that three major features characterize the transactions: uncertainty surrounding it; frequency of transactions; and specificity of assets involved in these transactions. Upon these attributes we can configure a rule of thumb, how to take an appropriate choice between the market and organization (enterprise). Higher *uncertainty* needs more and closer coordination preferring internal solutions like integration and concentration. “*Frequency* has more ambiguous effects: on one hand, it makes transactions easier to observe and monitor, lowering costs of contracting through markets; on the other hand, it allows implementation of routines that are easy to supervise, which may be favorable to organizations.” (*Ménard, 1996*) *Asset specificity* is considered to be the most tested and justified explanation of the existence of enterprise (organization/hierarchy) (*Williamson, 1985; Joskow, 1987*). High specificity indeed supports the decision of incorporating the asset within the frame of organization. Based only a contract it often creates a trap: it can induce opportunistic agents to take advantage of incomplete contracts. Therefore the more specific assets are, the stronger is the incentive to integrate.

Coordination is central problem of economics. Traditional economic thought treats market and enterprise as two discrete, insular mechanisms.

In the last decade, observance of a spread of diverse hybrid forms – like clusters – has raised the question whether coordination mechanisms really exist in such a discrete, insular form (*Coase*, 1937/2004, *Ménard*, 1996). Market – like an enterprise - cannot be treated as a coordination mechanism, but rather a result or field of coordination. The diverse existence of hybrid forms – like clusters – certifies that the existence of coordination mechanisms in different proportions finally determines the concrete field in which coordination takes place.


The ways of economic coordination can be set on an ordinal scale, in which ‘positive’ coordination is meant (through a competitive price system) to create market equilibrium. Market competition, based on supply-demand circumstances, decides whether economic decisions of market actors are adequate. The realized price cannot be judged and does not contain any values. The price mechanism of a market thereby **positively defines the equilibrium price without any reference to pre-defined values**, so this coordination rightfully composes the starting point of an ordinal scale.

The situation is totally different in the case of ethically-incurred types of economic coordination (e.g. corporate social responsibility, inheritance, bestowal, etc.). Here there naturally exists **an a priori value-order or normative** aspect, based on which the decision comes into existence. Such transactions are regulated by totally different mechanisms to those belonging to the field of positive coordination. Ethical coordination is thereby rightfully treated as one located near the normative end point of a sequence scale of economic coordination mechanisms.

It is evident that various stages exist between the two points which incorporate some characteristics of coordination found in both positions. It is also natural that there are no unequivocal demarcation terminologies; furthermore, a difference can not be interpreted between various modes concerning ‘positivity’, or ‘normativity’. Table 1 summarizes that which is mentioned above.

COORDINATION MECHANISMS

Table 1

Type of economic coordination mechanism	Typical field of coordination	Nature of coordination
Competition/price system	Market	
Contract	Market/Enterprise	
Order/planning	Enterprise	
Cooperation	Enterprise/Enterprise network/Cluster	
Business ethics, trust	Enterprise network/Cluster	

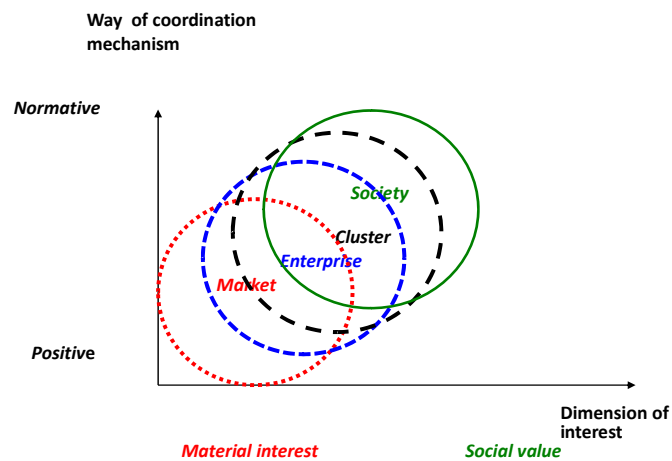
Source: Authors' own composition

If the market and enterprise are rather the sphere of coordination than that of the way, we have to put the question, whether the asset specificity really can orient the appropriate choice of coordination place? In contrary to traditional and empirically well tested answers (*Smith, 1776; Coase, 1937/2004; Williamson, 1985; Ménard, 1996, e.t.c.*), we dare say that asset specificity is just a part of the reasons, which adjust our choice. Based on our investigation the **dimension of interest**, rather than the asset specificity is the key term in choosing the suitable place of coordination. The “interest” term is used in accordance with the explanatory dictionary: “necessary and important item (thing), which serves in favor or utility of somebody or something” (*Szmodis, 2005*). In this approach asset specificity is just part of the **n dimension interest**: one dimension may affect the efficient utilization of that particular specific capacity of production (e.g. grape harvesting machine), but another dimension effecting the same transaction at the same time may touch the safeguard of specific professional knowledge which is generated and maintained via using this specific asset, e.t.c. In this way the more the dimension the stronger is the need for modes of coordination other than just the positive one.

It is also evident that, in different coordination fields, coordination modes are present simultaneously but there always exists one which clearly typifies the given field and gives it its main character. This thought is presented in Figure 1.

LINKAGE OF ECONOMIC COORDINATION FIELDS

Figure 1



Source: Authors' own composition

In Figure 1, there is no distinct hierarchy between fields of coordination. Meanwhile, it is important to see that various coordination problems can be managed in different fields by economic actors. From this point of view, for example regional clusters are primarily appropriate for managing such economic problems where the main characteristic of the core coordination problem cannot be typified by only (material) dimension. There exists some common value-order, some normative in a

given region, orientation to which seems evident to market actors. This value-order is not ethical in its nature by all means but represents such an economic value like e.g. the excellence of a wine-regions' wine. This value becomes a common organizing force for grape producers and wine processors. We state that from the aspect of success or commitment in competition, whether someone reckons this common value as one's own and takes it into consideration during one's economic decisions is of prominent importance.

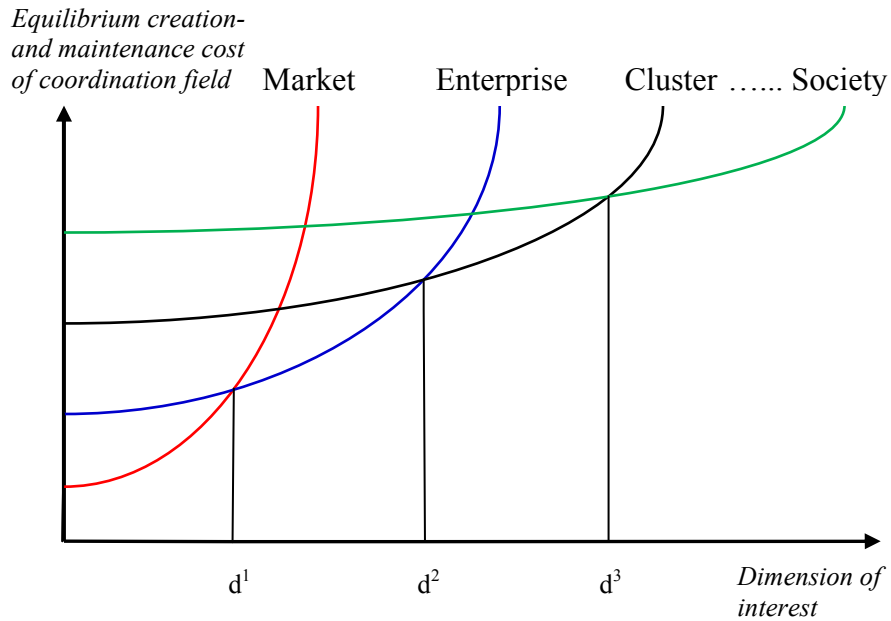
3. CHOICE OF THE COORDINATION FIELD

Now, we are able to give a general rule for making choice between different fields of coordination. During my research in the past ten years (*Popovics-Tóth, 2005, Tóth, 2003, 2005, 2007*) I came to the conclusion that the market, the enterprise and the cluster have got the same substance: all of them serve the same economic function, namely they are the fields, where economic transactions take place. Regarding that they serve for the same function, they can be analyzed with the same methods and tools. At the same time they are separated from each other with respect to the creation- and maintenance cost of equilibrium in the different coordination fields as well as the dimension of interest which is represented by the object of transaction. In this concept not only the "transaction cost" (c.f. *Williamson, 1991*), or the "governance cost" (c.f. *Ménard, 2004*) is taken into consideration. Transaction and governance cost refer first of all the market and enterprise/hybrid as fields of coordination. The concept of "*equilibrium creation- and maintenance cost of coordination field*" is much broader. In addition to transaction or governance cost it also includes e.g. the recovery cost of market crisis, or the financial consequences of a malfunctioning market regulation measure generated by the government. In this way the transaction- or governance cost can be regarded as integral part of this latter one.

Following these considerations we can make optimal choice between the different fields of coordination. This rule is presented in Figure 2.

CHOICE BETWEEN COORDINATION FIELDS

Figure 2



Source: Based on *Williamson* (1991) and *Ménard* (1996, 2004), the authors' own composition

According to the general rule, the market as a coordination field has economic advantages compared to the enterprise until the dimension of interest exceeds d^1 . After this point, the enterprise supplies more economic benefits in terms of less costly solutions. When the object of the transaction represents highly compound interest, the cluster, then the region or even the whole society seems to be the most appropriate field of economic coordination.

Neither the market players nor the decision makers are probably not conscientious rule followers in this respect. Although the parallel presence of all these coordination fields in the economy reflects the fact that the actors would like to spare with coordination cost, so the general rule has got influence on their decisions.

CONCLUSION

The previous discussions have brought us closer to some conclusions. *First*, we have argued, that the market (as well as the enterprise, cluster and network) is more the **place of coordination**, than that of the “modus operandi”. *Second*, we can stay that **there exists an ordinary scale of ways of coordination** based on the nature of “positivity” and “normativity of the mode of coordination. On the positive end of this scale the pure market competition is located, while the other end is occupied by the ethic based coordination. *Third*, we have pointed out that finding a suitable place for coordination the **dimension of interest of the transaction** is more orientating than just the specificity of asset: the more the dimension the stronger is the need for modes of coordination other than just the market competition. *Finally*, we have found that the **choice** between the coordination fields depends not just on the transaction and governance cost, but **on the equilibrium creation- and maintenance cost** of coordination field as well, which is much broader than the former one.

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