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Meeting blindly... Is Austrian economics useful for dynamic capabilities theory? [☆]

Andrey Shastitko ^{a,b,c,*}, Svetlana Golovanova ^c

^a *Lomonosov Moscow State University, Moscow, Russia*

^b *Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia*

^c *National Research University Higher School of Economics, Moscow, Russia*

Abstract

This paper relates competition studies and views on competition policy within Austrian economics to the dynamic capabilities theory. The idea of interacting research programs in economics is used to provide the frame for reflecting on particular issues of competition, on the one hand, and (1) ignorance, (2) knowledge (including tacit knowledge), (3) rationality, (4) equilibrium, (5) innovation, (6) entrepreneurship, and (7) monopoly, on the other hand. Unlike the majority of previous studies, these issues are discussed here mainly through the lens of new institutional economics. Williamson's three-level scheme is used to explain opportunities and constraints for mutually enriching exchange of concepts between different but close approaches in economic research. This paper shows that there are important interconnections and complementarities despite significant differences in objects of study and weak mutual flows of ideas and concepts.

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1. Introduction

Unlike neoclassical economics (NCE), Austrian economics (AE) has elaborated a set of concepts that are quite akin to recent developments in strategic manage-

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* Corresponding author, *E-mail address:* saedd@mail.ru.

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ment theories and evolutionary approaches to firm performance. To some extent, AE is even closer to the dynamic capabilities theory (DCT)—a contemporary concept in strategic management—than some concepts within new institutional economics (NIE) and even transaction cost economics (TCE). This is true despite significant differences in the specific object of studies: the market (AE) and the firm (DCT). As they are focused on different dimensions of economic activity coordination, the scientific schools often meet “translation difficulties” that become barriers to interaction of research traditions both at the level of systemic approach (e.g., NCE, AE, NIE, TCE) and with regard to particular issues concerning economic analysis. What are the sources of the misunderstanding? Is it possible to mitigate at least a part of the problem? That is what we would like to discuss.

The interplay of ideas between AE and DCT is very fragmented and not as well sustained as between AE and NIE. Some concepts are used in both theories (e.g., tacit knowledge, innovations), and some flows of ideas are not well articulated, such as the functions of an entrepreneur. Among the rare exceptions it is worth mentioning several works by Kirsten and Nikolai Foss devoted to these issues (Foss and Foss, 1998, 2001, 2002, 2006). This fact would not be so important if it were not for one circumstance: firms’ dynamic capabilities are not invariant to processes in the environment, namely to competition, restrictions of competition and competition policy. At the same time, these processes, as innumerable studies show, are crucially important for both economic growth and economic development.

The main purpose of this paper is to identify opportunities to intensify the flow of ideas between theories in order to better understand practical aspects of interactions between economic agents. This issue plays an important role in determining optimal competition policy design, in particular, and the potential engines of economic development, in general. From this perspective, the paper addresses the claim made more than 15 years ago by Oliver Williamson:

“...what is missing in business strategy, but is desperately needed, is a core theory... the microanalytic, comparative institutional, economizing orientation of transaction cost economics deals with many of the key issues with which business strategy is or should be concerned... The economizing approach to strategy should both contribute to and be the beneficiary of these developments (in the new science of organization).”

(Williamson, 1996, p. 321)

At the same time, as it will be demonstrated, AE concepts (especially related to competition issues) are very close in spirit to the analysis of dynamic capabilities and the search for sustainable competition advantages (SCA) of the firm—although there is considerable criticism of AE coming from NIE. This paper continues the line of work by Foss and Foss in interpreting the concept of competition within the AE, the interrelation between competition and ignorance, knowledge (above all, tacit), equilibrium, entrepreneurship, innovations and monopoly. Special attention will be devoted to the understanding of antitrust policy in Austrian economics in the context of antitrust law evolution and the accumulation of experience in applying its provisions.

Before proceeding it is necessary to describe the assumptions, limitations and general framework of this study.

1. *Point of view.* In this article, we do not compare, whether in-depth or briefly, AE and other research traditions,¹ neither do we perform a detailed analysis of internal discussions within AE on the issues mentioned above. In this paper, AE will be examined from the point of view of opponents rather than proponents. To analyze AE from the outside, we shall rely primarily on NIE, specifically on the research tradition originating from Williamson's works (which might be identified as transaction cost economics, TCE) (Williamson, 1985, 1995, 1996; Ménard, 2005). At the same time, the implications of DCT presented in several recent studies will be covered²—despite the fact that AE does not develop a systematized theory of the “firm”³ (unlike explanation of the “market”), which is the object of special attention for DCT.

2. *Why was NIE rather than NCE chosen as a benchmark?* There are at least three reasons. First, the opposition to NCE in AE has been pivotal to the positioning of AE on the “market of economic concepts” for the last several decades. For this reason, AE has been compared to NCE many times and from a wide range of perspectives. Second, NIE plays a role similar to AE as a school that fills in the gaps and corrects some failures of the approach adopted within NCE. Third, NIE is an important source of ideas for DCT and likely serves to conduct some AE ideas to DCT due to the elaborated elements of the conceptual core of NIE.

3. *Framework.* The survey of AE concepts related to competition issues and linked with different aspects of DCT⁴ is organized within the context of Williamson's three-level scheme known as “individual–institutional arrangements–institutional environment” (Williamson, 1995, p. 28).

This article is structured as follows. The first section is devoted to the working definition of competition within the context of AE compared to other research programs and DCT. The next three sections correspond to Williamson's three-level scheme: the third section covers different aspects of *individual choice*; in the fourth section, we discuss economic exchange through different *institutional arrangements*—primarily markets and firms; the fifth section is devoted to the *institutional environment* and its influence on institutional arrangements corresponding to different options (mechanisms) of actors' adaptation to changing circumstances. The sixth section presents a discussion of competition and competition policy problems within the context of the theory of industrial organization (IO) as the immediate theoretical basis for antitrust policy, with some questions addressed to DCT. The conclusions follow.

2. Issues of competition study in AE: Context

AE is a heterodox field of research that focuses on competition and its role in economic development. At the same time, this particular research program (in

¹ For general review see, for example, Caldwell and Boehm (1992); Vaughn (1994).

² See also the special issue of *Industrial and Corporate Change*, 2010, Vol. 19, No. 4.

³ Some theorists undertake attempts to reconstruct what the “Austrian theory of the firm” could look like (see, for example, Langlois, 2007, 2013) without presentation of the program of the study in a systemic way. They argue that in some papers in the Austrian tradition it is possible to find ideas that could form the core of the “AE theory of a firm,” including a discussion of the role of entrepreneurial activity, development of expertise and introduction of innovation in firm growth (Penrose, 1995; Sautet, 2000).

⁴ We are speaking about the Dynamic Capabilities Theory after Brian Loasby, who in fact insists on the presence of organization creating novelty as the subject matter of that theory (Loasby, 2010, p. 1304).

the Lakatosian sense; see Lakatos, 1978) consistently and strictly criticizes anti-trust policy in its entirety (Armentano, 1999; Boudreaux and Di Lorenzo, 1993; Di Lorenzo, 1990),⁵ unlike other theories that consider antitrust policy to be a set of tools to protect competition—even those theories that might be qualified as allies of AE from the normative point of view (Chicago tradition). Another reason for turning to AE is the dissatisfaction of some economists with NCE as the basis for addressing specific economic problems, including the development and enforcement of antitrust law. This dissatisfaction remains despite the significant modification of NCE as a result of “neoclassical enveloping” (Avtonomov, 1998).

An additional reason to turn to the issues of competition and competition policy from the perspective of Lakatosian research programs in economics is the ongoing debate on the grounds and consequences of competition policy (Baker, 2003; Crandall and Winston, 2003), which plays an important role in defining the competitiveness of firms to include ways to survive and develop under two types of challenges posed by (1) competitors and (2) regulatory authorities (in this case—antitrust agencies).

Finally, AE elaborates and develops concepts that are very akin to recent developments in strategic management theory—issues of sustainable competitive advantages (SCA) of the firm, particularly those related to dynamic capabilities (Katkalo, 2006, p. 385; Pitelis and Teece, 2009; Katkalo et al., 2010). As will be shown, AE complements the framework for dynamic capabilities drawn by other researchers as composed of TCE, the behavioral theory of the firm and evolutionary economics (Dunning and Lundan, 2010, p. 1226). Nevertheless, opportunities for mutual enrichment of the theories evidently remain underexploited.

The Austrian concept of competition and its application in economic policy relies both on notions commonly accepted in economic theory, such as market, equilibrium, profit and search for information, and on concepts more specific for AE: discovery, ignorance, entrepreneur and knowledge. However, the distinguishing feature of AE is not only the use of specific tools but also the specific understanding of the concepts that are broadly used within the framework of other research traditions. This applies both to NCE and NIE. Let us recall widely known examples. “Equilibrium” in the neoclassical vision is a situation where the parties to a transaction have no incentives to reconsider the choice made, whereas for representatives of the Austrian tradition, the main characteristic of equilibrium is taking full account of alternatives of using the available resources. Opportunity costs in the Austrian sense are subjective by definition and therefore difficult to compare interpersonally, while under the neoclassical approach opportunity costs are objectified at the level of individual choice. From this perspective we have one more argument to look at AE as a source for DCT, which actually failed to find NCE as counterparty for intellectual exchange. Another example is that according to NCE the “entrepreneur” is practically no different from the “manager” or the “owner” of resources, while in AE, it is the central actor of the economic system, with complicated relations to functions of the “owner” and the “manager” creating discrepancies even within AE.

Within the context of AE, competition (competitive order) is a process of discovery of new opportunities to use known resources, which results from the en-

⁵ See also <http://www.cato.org/pubs/regulation/regv13n3/reg13n3-dilorenzo.html>.

trepreneurs' taking advantage of their alertness edge. This definition combines two closely interrelated concepts reflecting the views of the founders of contemporary AE, Friedrich von Hayek and Ludwig von Mises—competition and entrepreneurship (Mises, 1966; Hayek, 2002; Kirzner, 1997)—developed further by Israel Kirzner, Dominick Armentano, Peter Boettke, Ludwig Lachmann, Richard Langlois, Gerald O'Driscoll, Murrey Rothbard, Joseph Salerno and others.

Proponents of AE see their main advantage over NCE in treating competition as a process rather than a condition or a result, both of which are static. The approach to defining competition as a process envisions the need for the strict separation of competition results from its conditions. NCE defines conditions of competition as market characteristics (in terms of the number of sellers, entry and exit barriers, product differentiation, distribution of information, market concentration indicators), and results of competition as equilibrium prices and quantities sold. At the same time, as the neoclassical approach does not qualify modeled individual choice as a *process*, the distinction between conditions and results in research, based on the assumption of full rationality, is also relative. This is why AE quite reasonably considers competition in its neoclassical interpretation through equilibrium exclusively as a certain state of affairs (Amendola et al., 2003).

Being necessary and useful, the working singular definition of competition is, as such, totally insufficient for presenting the concept of competition in AE from the perspective not only of NIE but also of DCT. Concluding this section, let us mention that the singular definition of competition within the framework of AE implicitly contains some aspects determining the program of further presentation: the way this process is connected to knowledge and ignorance, rationality of choice and tacit knowledge, equilibrium (lack of equilibrium) and monopoly, the function of an entrepreneur and the result of its fulfillment.

3. Competition in the context of individual choice

3.1. *Competition, ignorance, and knowledge*

The fundamental role of knowledge in AE explains the significance attributed to the use of knowledge in society by Hayek (1937, 1945, 1974). According to Hayek, the importance of knowledge stems from the fact that its accumulation in the process of receiving information and its subsequent use enables actors to adapt to constantly changing circumstances and to find opportunities to use scarce resources, both of which constitute important characteristics of the market process. The more efficiently valuable knowledge is used, the better economic entities' private plans and actions can be coordinated, and the better results of economic performance and development can be achieved.

According to Hayek, knowledge is incomplete for every economic entity. The statement complies with the provision concerning the ignorance of actors and partially the thesis of bounded rationality within the context of NIE. The downside of the problem of using knowledge in society is the high methodological status of the concept of ignorance within the AE.

Ignorance means a decision-maker lacks knowledge of circumstances and opportunities that matter from the point of view of attaining his goals, even if that person tries to make rational (reasonable) decisions. A process of movement from

ignorance to knowledge about new opportunities that enable the creation of new value is an important element of competition.

Conversely, this process is a necessary condition to provide firms' competitiveness. However, unlike the "ignorance–knowledge" issue from the individual choice perspective, DCT in fact addresses the issue of collective actions within a firm with multi-level routines. This means the "ignorance–knowledge" individual choice is a building block for understanding collective actions on the firm level.

Changing the borderline between knowledge and ignorance for actors is an essential feature of competition. The acknowledgement of the significance of such a borderline within the context of individual behavior is a characteristic of AE, but without an accent on collective actions based on mechanisms of coordination that are alternative to the mechanisms of prices—an idea which is clearly borrowed from TCE.

The distinction between knowledge and lack of knowledge is also present in the economics of information based on maintaining the optimization logic of individual choice. However, unlike AE, in economics of information, the resources used to receive knowledge have an opportunity cost (Stigler, 1961). The process of obtaining information is similar to other types of production processes and never involves unexpectedness (surprises).

Thus, discovery as the conceptual core of the competitive process for AE is something between the results of systematic search, when an economic entity obtains the *ex ante* lacking information, and windfall profit that did not require a display of features characteristic for an entrepreneur (Kirzner, 1997, p. 72). The obtaining and use of information on new opportunities through organizational performance is a process that has a similar nature to the one described by Kirzner with one important detail: *this information is a result of coordinated efforts of individuals within a mechanism of governance alternative to the market (in this case—hierarchy), which also might be interpreted in terms of dynamic capabilities or meta-routines* (Zollo and Winter, 2002). Dynamic capabilities following Loasby (2010, pp. 1303–1304) contain two sets of characteristics: (1) generic: the potential to deliver consistent performance within a specified field by repeated application of established patterns of behavior; and (2) specifically dynamic: capabilities that allow performance to be changed either in response to changed circumstances or to the exploitation of new ideas. According to Winter (Winter, 2003), dynamic capabilities are the second (higher) order capabilities that presuppose the ability of the firm to realize Schumpeterian innovations. A special feature of dynamic capabilities is the combination of frequent organizational actions (routines, or "best practices" unlike ad hoc improvisations; see Dunning and Lundan, 2010, pp. 1226–1227) and the uniqueness of changed conditions.

A similar problem arises in connection with modeling based on the assumption of information asymmetry, which is crucial for the principal-agent literature. The principal may be unaware of the characteristics of a particular agent that are important for the former, but at the same time, according to basic agency models, there is information concerning the characteristics of the distribution of different types of agents on a certain market. A proponent of AE would agree that the principal is unaware of the intrinsic characteristics of a particular agent and of goods and services provided by this agent. However, he/she would add that the principal does not have knowledge about the distribution of agents between

their different types either, or even about the very set of possible types of agents (at least *ex ante*). This is especially important for the case of multiple valuable characteristics of agents and of goods and services to be provided by them that remain hidden from the principal.

With respect to product markets, ignorance actually means the existence of opportunities to gain economic profit that remain temporarily unnoticed by participants in economic exchanges.⁶ A lack of ignorance is equivalent to a lack of opportunities not only for discovery but also for ranking alternatives by a decision-maker. This is why in a situation of full awareness by participants in economic exchanges, competition as a process becomes impossible. Moreover, it is the same reason why the subject matter (i.e., dynamic capabilities as sources of SCA) evaporates.

The concept of ignorance of the present but hidden (unperceivable but detectable as a result of the entrepreneur's actions, or exploitation of dynamic capabilities in DCT, as an expected but unspecified *ex ante* result) opportunities is supplemented in the Austrian tradition with ignorance in time. It is a lack of knowledge about the consequences of the actions of the decision-maker within the context of simultaneous activities of many other people atomistically adapting to changing circumstances. From this perspective, ignorance is closely connected with unpredictable and unexpected results of competition.

It is important to emphasize that unpredictability of the future may be quite expected and apparent to the actors. However, the neoclassical model of search for information does not at all fit into the logic of AE or DCT because in the NCE an agent compares the costs of search and acquisition of information, on the one hand, and the anticipated benefit from the use of this information, on the other hand. However, these considerations hardly cover all of the relevant issues.

It may seem that the formulation of the problem of ignorance of the “Austrian individual” has been well described in terms of uncertainty in the models of individual choice, which are among the most well developed in NCE. However, this is only the first impression. The assumptions used in these models are criticized (including behavioral economics research by Kahnemann, Tversky, DellaVigna and others; see Pesendorfer, 2006). Let ignorance correspond to uncertainty according to Knight (1921), rather than hazard with a known objective probability of the onset of different versions of future events. In reality, however, ignorance does not boil down to uncertainty; this is true not only in the traditional neoclassical sense of the word, but even in terms of parametric uncertainty, which Knight presented as the true uncertainty whereby the set of elementary events is complete but identifiable probabilities are only subjective.

Uncertainty in AE means that elementary events are unspecified *ex ante* and it is therefore impossible to estimate the value of investments in obtaining reliable information. This is a characteristic of *structural uncertainty* (Langlois, 1984), within the frames of which a decision-maker can see and, hence, specify only part of the probable outcomes; the rest of them fall into the category of strategic surprises. The opportunity to react proactively on unspecified *ex ante* changes in circumstances is among the key building blocks of DCT as an explanation of SCA in a permanently changing environment with various types of shocks.

⁶ They might suspect that there are some opportunities, but because of the lack of specification these opportunities remain unexploited.

An actor may acknowledge that events he/she is unaware of may take place in the future. Moreover, these events might have a significant impact on opportunities to attain his/her goals. This is why the characteristics of individual behavior—in addition to rationality and ignorance—also include learning and, finally, adjustment (by incorporating recent experience in initial plans).

To draw a line: according to AE, competition is a process of moving the borderline between ignorance and knowledge, but neither the costs nor the benefits, nor the very moment of acquiring knowledge, can be evaluated *ex ante* and hence cannot be an object of rational choice (in the sense this concept is interpreted by NCE).

The *ex post study of behavior and exchange results only creates the veil of certainty which might create significant risks of errors in decision-making if applied to the normative area*. Regarding antitrust policy, it is related to risks of type I errors: accusation and prosecution of an innocent actor by imputing to him an awareness of processes that *ex ante* were (ineradicably) unexpected. Regarding strategic management issues it might provide false ground for an *ad hoc* reaction to a particular event without a broader context of the issue: development of proactive adapting firms' capabilities. DCT contains the important idea that SCA is a consequence of systemic and firm-specific dynamic capabilities that are not ready to be substituted for perfect forecasts (as it is implicitly supposed).

3.2. Competition and rationality

Rationality is a fundamental concept in economics. It establishes correspondence between an actor's goals and the means of their attainment (Robbins, 1935, p. 16). Despite the simplicity of the definition, the use of this concept is related to a number of methodological problems. It is sufficient to note the variety of forms of rationality, including its classification into functional and instrumental; full, variable and bounded; procedural and substantive rationality (Avtonomov, 1998; Simon, 1978).

The traditional concept of rationality of choice within the frames of NCE is based on the optimization technique applied in economics where subjective criteria of rational choice are not essential. From this viewpoint, rationality is instrumental. Competition might be considered as a set of conditions and as a result in conjunction with instrumental rationality. Thus, instrumentality of rationality makes redundant the attempts to disclose the nature of competition as a process, if it does not rule them out completely.

According to AE, human rationality cannot be regarded in terms of optimization because inseparable elements of the optimization task are formed *in the process* of the market's functioning. To understand the nature of competition within the context of the Austrian approach it is insufficient to change the assumption of full rationality for the assumption of bounded rationality as in TCE. Of paramount importance is the decision-maker's ignorance of various circumstances that matter for the purpose of attaining his goals. Moreover, a person's ignorance can also be the result of a rational (but not necessarily maximizing) choice. Meanwhile, the relationship between competition and rationality in AE is far from being as trivial as it seems in the context of competition models constituting the elements of the theory of price. In fact, if competition is weak, participants' decisions are not taken at the boundary of opportunities—both technological and allocative (e.g., not all cost saving opportunities are used according to Leibenstein's (1966)

X-efficiency concept). This can be explained by the fact that the process of decision-making is not free of charge and errors, on the one hand, and that it requires time and rather serious emotional tension, on the other hand. Thus, a lack of competition correlates with the slack in behavior in search of opportunities to create value/ minimize cost as a way to provide SCA. At the same time, the limited opportunities for imitation are actually a condition for rent appropriation (*ex post*), on the one hand, and are incentives to develop capabilities (*ex ante*) (Kay, 2010, p. 1210), on the other.

At the same time, the intensity of competition may limit the opportunities for reasoning due to an increase in opportunity cost of each section of time as a frame for decision-making. In other words, time-specificity of decisions is one source of profit that is unlike wage and interest in an “evenly rotating economy” (Rothbard, 2009, p. 511). This in turn leads to a substitution of rational decision-making by intuitive decision-making. Using the comparative analysis of cognitive systems suggested by Kahneman (2003), the latter, in addition to offering conceptual presentation and codification of opportunities, may be even faster and in many cases may require less effort. This is a possible direct effect of competition. However, competition may have an adverse effect connected with the extension of opportunities for reasoning on the basis of development and application of special techniques and algorithms of decision-making. In some sense, the extension of the sphere of rational decisions by adding intuitive decisions conforms to the concept of “procedural rationality” in accordance with which algorithmized decision-making and actions substitute discretionary ones. A firm’s dynamic capabilities—unlike those of a person—combine parallel rational decision-making within a particular framework without excluding intuition.

At the same time, from the point of view of the *result*, decisions might actually be qualified as rational even if their adoption involves a large share of intuition. In this sense, rationality becomes a synonym for efficiency (or the choice optimality) both for the individual and the firm. Yet, situations are possible where reason is not used or is used insufficiently, not because of lack of *time*, but because of lack of *incentives* for identifying and comparing resource-available alternatives. A considerable share of such situations is associated with external competitive constraints for market players. *Competition involves more rational actions defined in terms of results*, although there is no clear mutual consistency between the strength of competition and reasoning behind the market players’ actions. This conclusion is closer to AE, which follows the logic of organic rationality, or rationality of the process (Williamson, 1985), which is actively explored by evolutionary theory. Thus, mechanisms balancing individual intuition, on the one hand, and individual and collective reasoning, on the other, look like engines for revealing new opportunities as a source of SCA.

The concept of awareness and rationality plays an important role in antitrust policy. The conceptual basis of antitrust policy presumes that the market players restricting competition can anticipate the effect of their actions. Moreover, other market players are assumed to be capable of identifying the actions of competitors and counterparties and their impact on the terms of their own decisions. Therefore, other market participants can evaluate the extent of the impact of counterparties’ and competitors’ actions on the competitive environment. Evidently, this concept is completely unacceptable for AE. It may also seem ambiguous from the point

of view of NIE. However, NIE, unlike AE, does not consider the battle for market players' opportunities for rational decision-making hopelessly lost.

In this connection, the assessment of competition advocacy is relevant as a specific component of antitrust policy. The main purpose of competition advocacy is to promote ideas and values of competition in society and convincing market players that active competition benefits them compared to enforcing of competition by legal rules.

The reason for advocacy in the framework of NCE is unclear. Assuming that economic entities are capable of evaluating their potential gains from alternative versions of the market structure, expenses of competition advocacy seem to be an embezzlement of resources. Regarding NIE, competition advocacy seems quite reasonable, since informing market participants reduces enforcement costs. The idea of competition advocacy might seem to be close to AE, given that the papers by Hayek and Mises are a true hymn to the competitive order. However, AE does not support competition advocacy, albeit for different reasons than their colleagues' abiding principles of NCE. From the perspective of AE, arguments favoring competition may only be part of a policy of manipulation but, by definition, cannot be an element of informing market participants.

The skepticism of Austrians concerns not only antitrust policy but also competition policy in general. In contrast to NCE models that proceed from the assumption that all market participants are aware of the possible gains and losses in any state of the world, AE argues that no one can know about these gains and losses, including the corresponding state agency. In this context, judgment regarding a preferential market status is not possible, nor are evaluative judgments concerning the market structure and the actions of its participants. It is very important to stress that we might find strong separation of market concentration issues from competition within the AE research tradition (Mund, 1933). This idea was also supported by the mainstream IO several decades later when the previously dominant unidirectional approach within "structure–conduct–performance" paradigm (when concentration was thought to influence competition but not vice versa) was revised.

3.3. Competition, innovation and entrepreneurship

The figure of an entrepreneur in economics is perhaps one of the most ambivalent and ambiguous. It arouses the greatest level of discord among representatives of different traditions in economic research. This becomes particularly clear when comparing the concept of an entrepreneur with actors such as consumers and owners of resources. It is not accidental that standard economics textbooks seldom contain systematic presentations of the theory of entrepreneurship. This is even the case for AE, where Kirznerian concept of the entrepreneur is criticized by his colleagues for the erroneous separation of entrepreneur and owner, while other AE proponents (Rothbard, Salerno) appeal to "one-sided complementarity". This vision might be found in von Mises's theory of entrepreneurship, which argues that an entrepreneur is always a capital owner but not every owner is an entrepreneur (Rothbard, 2009, p. 511; Salerno, 2008). Without delving into a review of entrepreneurship theories and their variations within AE we find it necessary to highlight some aspects important for understanding

the concept of entrepreneurship in the context of competition studies in AE that are applicable for DCT.

First, although Kirzner argues that the entrepreneurial function is not logically connected with property rights to assets, de-facto one-sided complementarity highlights the significance not only of the incentives for appropriating profit but also of the readiness to bear the burden of risks of losses in case of failure. This idea is important for dynamic capabilities of the firm that confronts not only the uncertain benefits but also probable losses, as allocation of property rights is important in order for the decision-maker to make what are likely to be painful decisions.

Second, the entrepreneur's function might be explained in terms of arbitrage (spatial and inter-temporal) due to discovery of new opportunities for coordinating the individual plans of market players. Within this context the concept of an entrepreneur is close to the concept of arbitrage, which is easily compatible with NCE. In fact, there are usually sellers on the market who sell products that are underpriced or overpriced, and buyers who are ready to pay higher or lower prices for these products. However, buyers ready to pay higher prices may be unaware that the same product can be purchased at a lower price, and the sellers offering the product at a lower price may be unaware that someone was ready to purchase their product at a higher price. Obtaining and processing this type of information may be too expensive, but not for all market players.

The entrepreneurial function consists in identifying such buyers and sellers (bearers of individual plans) and making a profit without violating the interests of each of the actors, which constitutes a necessary condition for voluntary exchange. However, this has a spill-over effect in the form of translation of economically important information by the entrepreneur to other market players concerning the existing opportunities to use the assets at their disposal and, correspondingly their value.

Consequently, if all opportunities are reflected in the prices, which happens in a situation of Pareto-efficient equilibrium, space for exercising the entrepreneurial function disappears, as does the possibility of generating entrepreneurial profit. In this sense, there is an insurmountable contradiction between the neoclassical model of general equilibrium and the concept of entrepreneurship in AE.

Dynamic capabilities as a source of SCA are in turn the outcome of institutional entrepreneurial activity, including organizational innovations. At the same time, as it might be supposed, dynamic capabilities providing SCA are not invariant to the particular institutional environment including the mode of enforcement of antitrust norms. That is why significant changes in the institutional environment might require changing some dynamic capabilities of the first type (generic) by using dynamic capabilities of the second type (specifically dynamic). In any case, however, these changes are costly and time consuming. Moreover, there are some grounds to doubt the substitutability of the two types of capabilities. This means that entrepreneurial activity aimed at SCA is also differentiated where two types of dynamic capabilities are concerned.

Third, entrepreneurs are people who can quite easily be analytically singled out from a multitude of economic agents, but are much more difficult to identify empirically (Salerno, 2008). This is connected with the fact that being a member of a group of managers, workers, landowners, consumers and owners of capital

does not make a person an entrepreneur. For this, he/she should display his/her own alertness in finding and using previously hidden opportunities to use underpriced assets. In the extent to which actors cope with this task, they might be qualified as entrepreneurs. That is why dynamic capabilities are crucially dependent on fulfillment of entrepreneurial function.

Fourth, people have different attitudes, including the ability to notice this sort of opportunity. On the one hand, there are incentives for detecting them; on the other hand, far from everyone actually gains this profit. There is a danger of sustaining net losses as a consequence of an error resulting from excess decisiveness (self-confidence, as is known from behavioral economics literature). In this sense, different levels of awareness of market players reflect a differentiation of focus (or perceptiveness, according to Kirzner). The origin of this differentiation of focus as a person's ability to notice opportunities is a separate issue. It is important to emphasize that a set of alternatives as a certain "menu" is not free of charge in the coordinate grid system of individual choice, which envisions the identification of entrepreneurs among the entire multitude of economic agents.

Entrepreneurs have an advantage in identifying hidden opportunities and therefore shift the system of economic exchange toward equilibrium in the sense that, *ceteris paribus*, the system of prices provides a more complete account of the set of resources and the multitude of alternative options for their use if external shocks do not move the system away from equilibrium proxy. In this sense, the very generation of hidden opportunities remains beyond the realms of focus of AE to the extent that the processes of changing preferences, available production technologies, as well as set and quantity of available resources are not being taken into consideration. One crucial point not only for the vision of competition and entrepreneurship but also for policy issues is the inappropriateness of the representative market actor concept. This point is quite similar to DCT based on four features of resources, namely, valuable, rare, inimitable and non-substitutable (Katkalo et al., 2010, p. 1175), because it presupposes the uniqueness of resources.

Disclosing *hidden* opportunities can be closely connected with the creation of *new* opportunities, which are largely described in terms of Schumpeter's (1912/1934) theory of economic development, but are quite suitable for purposes of explaining the basis of AE. Specifically, organizational innovations enabling resources to be recombined to increase the efficiency (productiveness) of their use may at the same time lead to restrictions of competition from the point of view of the antitrust authorities and the court, even though they are nothing other than manifestations of entrepreneurship and, hence, competition. In this connection, an exhaustive (closed) list of prohibited forms of economic organization (contracting) enables type I errors to be minimized, thereby outlawing such actions and agreements of a market player that do not restrict competition in reality (Joskow, 2002; Shastitko, 2011).

Specifically, imposing restrictions on selling products of a competing brand might be regarded as an institutional arrangement in the form of a vertical restraint, which allows efficiency to be raised by providing higher quality services at the same prices. However, unlike the Chicago tradition of research of non-standard commercial practices or the tradition of NIE, which identify both negative and positive effects of this sort of restrictions, AE has not developed its own approaches. On the whole, this is explained by the generally skeptical attitude

towards antitrust policy as a set of instruments for improving the market's performance—and hence, towards the need to improve its tools. What is the positioning of DCT within the context of the search of SCA taking into account capabilities related to the practices mentioned above?

For AE, the discharge of the entrepreneurial function is the driving force of economic development as well as the way to provide SCA (in DTC context). In principle, it does not raise the issue of a possible negative impact of entrepreneurship on welfare. For NCE, on the contrary, such a view of the issue has long been traditional, especially when the point is entrepreneurship under conditions of significant market power. Such difference in interpreting the role of entrepreneurship is reflected not only in the methodological status of the concepts of competition and monopoly but also in the normative component—the best policy design with respect to competition.

4. Competition in the context of interaction between market players

4.1. Competition and market equilibrium

Following the logic of AE, competition is a process that exists only in a disequilibrium economic system in the sense that not all options for using resources are reflected in the system of prices and taken into account in economic agents' plans. This is the case irrespective of some disputes within AE on the methodological status of the equilibrium concept (see, for example, discussions of Kirzner and Lachmann and followers related to the issue of whether the market process is inherently equilibrating—Kirzner's opinion—or whether its performance generates disequilibrium).

Economic agents' plans and expectations are only partially compatible, which becomes clear at the moment they start interacting with each other. This is why long-term equilibrium on the market of perfect competition was regarded by Austrian economists as a *contradictio in adjecto*. Nash equilibrium as one of the main tools of competitive analysis in contemporary microeconomics seems to be a similar although less obvious contradiction. If there were no profitable shift from the selected strategy, given a particular strategy of another party, to another strategy or party of strategic interaction, economic development would stop.

The methodological status of market equilibrium in AE has an important characteristic. Equilibrium is not a starting point in explaining the functioning of the market using the method of comparative statics even from very "NCE-like" AE of Kirzner. The result achievable with different levels of probability and proximity reduces the ignorance of market players (zero ignorance is an equilibrium correlative) (Kirzner, 1997, p. 62). The parameters regarded by NCE as an essential element of equilibrium turn out not to be even a result in AE, but rather a *direction* of changes on the market explained by the actions of the market actors. According to AE, a market process takes place only when the results differ from expectations. This compels market actors to adjust expectations and decisions in the next period and change the mode of actions. This sort of adjustment is made in the form of revision of the opportunities set open (visible and attainable) to decision-makers. As a result of such revisions, some opportunities turn out to be phantoms and others overlooked.

The very discovery of this sort of opportunity is closely connected with the interests of actors, since it is their individually assessed opportunities, rather than the opportunities of society as a whole. In addition, the revision of opportunities is aimed at increasing private net benefits, thus consistently approaching the “possibilities frontier” for profitable business activity. However, such a result is possible in the case of offering more attractive conditions to partners in the market process and outdistancing one’s competitors.

If equilibrium is achieved, plans and expectations are compatible, the market players are not being offered more attractive alternatives which were unnoticed before. It means that competition has stopped being an active force. It corresponds to internal contradiction in the Arrow–Debreu model recognized by Frank Hahn and stressed once again by Brian Loasby (2010, p. 1301). Since the intertemporal equilibrium is derived by collapsing the future into the present, there can be *no need for any further decisions*.

Equilibrium accounts for the side effects and unforeseen results of interactions of entities acting in their own interests. It is impossible to plan this result due to the ignorance of the decision makers for whom the discovery of new opportunities is a surprise in the sense that none of the participants can specify the parameters of the “surprise” *ex ante*.

Explaining the obtained results *ex post* is the most that can be achieved. This feature of equilibrium is a basis for far-reaching conclusions regarding economic policy in the sphere of competition protection with important backward implications for firms’ SCA specificity and related dynamic capabilities. It is noteworthy that AE is close to NIE regarding this matter. The fewer elements of so-called hybrid models that NIE models contain (i.e., assumptions of full and bounded rationality, zero and positive transaction costs in different dimensions of economic exchanges are combined), the farther away they are from the orthodox methods of NCE and the less these structures rely on the concept of equilibrium and the more they rely on descriptions of characteristics of coordination mechanisms. It is not accidental that comparative analysis of governance mechanisms is the core of the methodology in the TCE. The key problem here is combining the incentives design with the development of mechanisms of economic agents’ adaptation to changing circumstances (Williamson, 1985, 1996).

The market conditions are changing under competition. Specifically, production (transformation and transaction) costs change connected with the restructuring of production capacities demonstrates the difference of competition as a state of affairs determined in terms of equilibrium and competition as disequilibrium. Within such a formulation of the problem, the number of market players has no significance for evaluating the intensity of competition, which is in contrast with the Harvard research tradition beginning in the middle of the XX century.

Competition defined in terms of market equilibrium is closely linked with the problems of the market structure. Paradoxical as it may seem, in this matter, AE does not criticize the neoclassical mainstream, but rather the Harvard school, which is far less connected with it. The early (Harvard) school that worked within the program “structure–conduct–performance” regarded the equilibrium characteristics as a result of a certain market structure. This particular program was the main object of AE criticism.

The modern theory of industrial organization has long stopped supporting the postulate of unilateral dependence: the market structure determines conduct and thus the characteristics of results (prices, quantity, welfare effects). Models where the market structure is being formed under the impact of decisions of its participants, including strategic interaction as it is presented within game-theoretic framework, had become much more widespread several decades ago. This particular approach is closest to the Austrian concept of competition as a process. The parameters that were qualified by the “structure–conduct–performance” research program as exogenous turn out to be the results of the actions of the market players, e.g., production costs related to the employed technologies and forms of economic organization used.

Turning to competition policy issues from the perspectives of equilibrium and SCA the following should be stressed: actions, namely antitrust enforcement, aimed at the establishment and control of economic activity parameters that are largely a result of entrepreneurial activity have a negative impact on entrepreneurship, weakening and distorting incentives. Some of these consequences are (1) the mutation of SCA, (2) the weakening value creation activity and (3) the strengthening SCA in redistribution or rent-seeking.

Therefore, competition in AE is possible only in a situation of market disequilibrium. Fixing an equilibrium is equivalent to the absence of competition. This is what hinders dialogue between AE and researchers using competition models that constitute the conceptual basis of competition policy. In these models, Nash equilibrium and similar instruments are crucial for positive analysis and normative conclusions.

4.2. Competition and monopoly

The interplay of competition with other important analytical elements of AE provides a key to understanding the radical contradiction between AE and NCE on the issue of monopoly.

From the Austrian position, a market process exists as long as there is freedom of sale and purchase based on specified and protected property rights, and a market process means competition. In this context a monopoly examined in economics as a special market structure is a myth because even a monopolist in the neoclassical sense of the word encounters the need to reveal hidden opportunities that are not reflected in current prices as a means of balancing the market (Kirzner, 1997, p. 69).

This does not mean that monopoly does not deserve Austrians’ attention. Monopoly is the opposite of competition, which is what underlies the approach to defining monopoly and to making relevant normative conclusions by the Austrian school. Competition is a process in which economic agents (entrepreneurs) offer more appealing alternatives to their counteragents, whereas the restriction of this sort of opportunity is none other than monopoly. This is why the main source of man-made monopoly is the government, which restricts the choice of alternatives by means of regulation (Armentano 1999, p. 96).

However, the impossibility of legitimizing private monopoly on the final product market does not mean the impossibility of legitimizing private monopoly in principle. The distinction between the monopoly of a manufacturer as a product (service) producer and the monopoly of a manufacturer as a resource owner

is of principal importance to AE. This distinction is largely manifested in normative evaluations of two types of analytical elements. The element of resource monopoly is legitimate whereas the product monopoly (naturally, on an unregulated market) is a myth. For example, this myth is close to Rothbard's skepticism towards cartels'—the most dangerous antitrust law violations—instability:

“...a cartel is an inherently unstable form of operation. If the joint pooling of assets in a common cause proves in the long run to be profitable for each of the individual members of the cartel, then they will act formally to merge into one large firm. The cartel then disappears in the merger. On the other hand, if the joint action proves unprofitable for one or more members, the dissatisfied firm or firms will break away from the cartel, and, as we shall see, any such independent action almost always destroys the cartel. The cartel form, therefore, is bound to be highly evanescent and unstable.”

(Rothbard, 2009, p. 651)

Remarkably, these ideas correspond to the so-called hostile tradition in antitrust described by Williamson (1985).

Exclusive control over a resource without which production of a certain set of goods and services is impossible creates opportunities for generation of profit that is monopolistic rather than entrepreneurial. In terms of DCT it is a specific Ricardian rent rather than a Schumpeterian rent. Unlike monopolistic profit, entrepreneurial profit is unstable and transient. Gaining it requires permanent efforts aimed at identifying and creating new opportunities and combinations of resources to make the outcomes more appealing for counterparties seeking for dynamic capabilities to provide SCA within the context of value creation.

It is much more difficult to establish a dialogue with respect to natural monopolistic activity in regulated sectors. From the perspective of AE, the very concept of an economic basis for identifying a natural monopolistic activity is erroneous (Di Lorenzo, 1996). The regime of natural monopoly is a result of collusion between the government and companies that have sacrificed the right to free pricing in exchange for a guarantee of entry restriction and compensation for losses, including normal profit. At this point, the positions of AE and representatives of the economic theory of regulation differ quite significantly. Even attempts to introduce competition to natural monopolistic markets requiring a radical reform of the regulation regime are seen by representatives of AE strictly negatively as addressing problems by inappropriate methods.

Therefore, the main specific feature of AE for establishing interrelation between competition and monopoly consists in the fact that AE sees the source of monopoly in circumstances which are *external with respect to market performance*: government interventions, exclusive and monopolistic rights to natural resources essential for the production of relevant goods and services. Free market is considered competitive by nature. From this point of view, the concept of private monopoly as a source of loss of public welfare is groundless, as is the theory of market failures.

In AE we might find some sort of theorems on privately induced monopoly in contrast with the state-induced one. The key element of proof is presented by Rothbard:

“Why has he [producer] been able to extract a “monopoly price” through restricting his production? Only because the demand for his services (either directly by consumers or indirectly from them through lower-order producers) is inelastic, so that a decreased production of the good and a higher price will lead to increased expenditure on his product and therefore increased income for him. Yet this inelastic demand schedule is purely the result of the voluntary demands of the consumers. If the consumers were really angry at this ‘monopolistic action’, they could easily make their demand curves elastic by boycotting the producer and/or by increasing their demands at the ‘competitive’ production level. The fact that they do not do so signifies their satisfaction with the existing state of affairs and demonstrates that they, as well as the producer, benefit from the resulting voluntary exchanges.”

(Rothbard, 2009, p. 634)

There are at least three ways to criticize this point of view from the perspectives of different approaches.

First, NCE: the monopoly price appears on the elastic segment of market demand in terms of the standard of elasticity estimates adopted.

Second, NIE: obvious problems of collective action and the free-rider problem are omitted, assuming that consumers are aware of the consequences of practices implemented by the producer.

Third, behavioral economics: it is not always clear whether the producer exploits consumers distributing part of the potential benefit in his own favor at the expense of consumers.

5. Antitrust policy

Normative applications of the concepts developed within AE, including the concept of competition, are one of the most important and at the same time most sensitive issues closely related to practical problems in searching for firms’ SCA. AE has always been in opposition to NCE as a research program in economics on virtually all key problems of economic policy, especially competition policy, irrespective of whether the Harvard, Chicago or post-Chicago (influenced by NIE) approach to studying competition prevailed. Normative conclusion on antitrust policy would be summarized very briefly as “abolish antitrust”.

The authors of the Austrian school, in particular, negatively assess the efficiency of antitrust policy in terms of fostering competition as a vehicle of economic development. This is partially connected with the contradiction between the fundamental concepts of the two schools and partially with a simple lack of mutual understanding. Proponents of AE believed that all designs in the development of antitrust policy measures proceed from the model of perfect competition⁷ while there were at least two waves of antitrust reshaping in the 1970s and

⁷ See, e.g., Kirzner (1997, p. 94). Such an evaluation prompts the question of whether what was said is merely a consequence of serious difficulties in translation in a broad sense of the word between competing research programs, or that contemporary models can actually be reduced to basic elements of the model of perfect competition.

1990s. In reality, the overwhelming majority of economists who do not agree with AE postulates would join the idea that the theory of perfect competition as a “blackboard theory” at the moment has no direct relation to the contemporary antitrust policy.

According to AE, antitrust policy as a system of rules (exclusions of contract freedom principle) and enforcement mechanisms is based on the erroneous interpretation of the nature of competition or on government actions distorting the competitive environment. Such evaluation of antitrust policy foundations by AE does not leave much room to discuss the differences in interpretation of directions or spheres of application of antitrust policy methods.

All of these are regarded by AE as harmful for competition. For example, a selective antitrust ban on mergers is interpreted as a restriction of entrepreneurial activity and is therefore qualified as an anticompetitive action *irrespective* of the characteristics of a specific merger or affiliation and possible implications for the relevant markets (Kirzner, 1997, p. 94; Rothbard, 2009, p. 643–644).

The ban (or even structural and behavioral remedies) on cartel agreements is evaluated likewise. Let us demonstrate Austrians’ evaluation of the ban on agreements and sanctions on their participants using a concrete example. One of the most widely known antitrust cases of the past decades is the case of the “vitamin cartel.” Eight of the world’s largest manufacturers of vitamins were collectively penalized for price collusion in an amount exceeding 800 million euros.⁸ AE regards this decision as one of many failures of antitrust regulation, because it was issued on the basis of an unjustified assumption of overpricing, whereas it is impossible to estimate the level of prices that could have been formed on the target market of vitamins without collusion. Intervention by antitrust authorities is interpreted as a violation of the principle of freedom of contract. The enforced leniency program seems to be nothing but a tool of unfair competition and a way to “pull the rug out from under” a competitor (Kim, 2007).

This is why in this case there is no sufficient reason to examine the differences in the ideas of AE, for example with respect to vertical restraints, tacit collusion or merger control that could become a subject of comparison to the Harvard, Chicago and Post-Chicago approaches in the theory of IO, or the implications of these actions from the perspective of DCT.

The notion of market failures is the conceptual core of the discussion about the foundations and instruments of antitrust policy in the context of the interacting and competing research traditions.⁹ The idea of market failures¹⁰ contradicts the AE approach, whereas in NCE they have been regarded as grounds for government interventions in economic exchanges since the works of Arthur Pigou, while for NIE government intervention is one of possible remedies for market failures but not necessary a better one. In this sense, a compromise between AE, NIE and NCE concerning the antitrust policy possibilities and framework seems quite unlikely.

⁸ The review of this case see, e.g., in: Aubert et al. (2006, p. 1242).

⁹ A critical review of the relationship between antitrust policy and market failures, and their compensation methods, is presented in Meese (2005).

¹⁰ Especially remediable by the state activism in any active form—regulation and “the state entrepreneurship”.

Evidently, not only the practice but also the principles of antitrust policy may seem ambivalent. One of the most complicated methodological and practical problems is a (theoretically rather trivial) conceptual separation of the protection of competition from the protection of competitors. The thesis “Competition policy should protect competition rather than competitors” is well known among researchers and politicians. Its implementation implies that antitrust policy should not be used as a tool by groups of special interests in pursuing their goals (as an instrument of unfair competition). However, to what extent might this principle be implemented in practice? In addition to any other policy envisioning the setting of rules and enforcement mechanisms, the antitrust policy has certain distributive implications that might be interpreted (at least *ex post*) as protection of particular groups of market players (including competitors).

According to the logic of the Austrian approach, special protection of competition by the government leads to competition restriction, i.e., the opposite result. This argument is used to draw a general conceptual conclusion that antitrust policy is not needed for rectifying the market operation.

Unlike the problem of antitrust legislation as a whole, the comparison of different schools’ conceptions of particular antitrust policy tools has a certain perspective. A comparison of AE and NIE research traditions (with respect to TCE) shows *contrasting attitudes to the rule of reason vs. per se rule* in antitrust.

Let us recall that the *per se* rule means the sufficiency of establishing conformance of activities or agreements to those prohibited by law. If such conformance is established, they are recognized as guilty of violating antitrust law. The rule of reason, on the contrary, allows the restriction of competition if such practice results in consumer benefits and if the overall effect for the business practice is positive. Drawing a demarcation line between the two rules depends on the reliability of the information on the distribution of benefits and losses and on the overall gains from the use of various forms of restricting agreements. Applying the rule of reason is justified only if we believe in the ability to evaluate the gains from the adopted commercial practice.

The problem of ignorance is expressly raised both in the frames of AE and TCE. However, Austrians avoid identifying an ideal outcome of the market process for principled reasons of its unpredictability. In contrast, the approach based on Williamson’s work does not rule out identifying an ideal outcome, although it questions the possibility and necessity of taking this outcome into account while formulating policy for the real world (Voigt, 2006, p. 210) as well as in evaluating organizational performance.

Here, we might formulate some very practical implications for DCT. Firms’ SCA might depend on economic concepts that in fact stand behind some economic policy instruments’ design and their implementation. Regarding antitrust policy, it becomes a challenge to create firm-specific capabilities to minimize the risks of antitrust prosecution. The example is antitrust compliance policy. Being a part and parcel of the business model it refers to the requirements of the regulatory environment and guides interactions with antitrust authority. However, these capabilities might be not only value creating but also value (re)distributing. This is why managing antitrust risks does not necessarily mean value-creating activity by firms on the market taking into account opportunities to reach private goals using antitrust agency as a tool. These worries come directly from AE.

6. AE and policy implications of the theory of industrial organization: Questions for DCT

The practice of antitrust law enforcement, starting at least from the second half of the 20th century, relies more or less on the concepts developed by economic theory. It has been mentioned by Richard Posner:

“Looking over the entire history of U.S. antitrust law, I conclude that the most powerful explanatory variable is simply the state of economic opinion. Antitrust doctrine has changed more or less in tandem with changes in economic theory, though often with a lag.”

(Posner, 2001, p. 286)

This is particularly visible in the United States, where the dominance of the Harvard school in the studies of competition and antitrust policy issues during the 1960s–1970s was followed first by the Chicago tradition, and later, at the turn of the 21st century, the Chicago tradition was gradually displaced by Post-Chicago concepts based on considerably wider involvement of NIE concepts. The concepts of the market, competition, and the role of antitrust policy, which are alternative to AE, underwent significant changes.¹¹

The Harvard school is considered to be the starting point for development of the contemporary competition theory inherited primarily from Joan Robinson and Edward Chamberlin in the 1930s. Within the context of the Harvard approach, major market participants were recognized as admittedly being motivated to restrict competition. The dominance of the Harvard school in interpreting the conduct of market players conforms to the dominance of the *per se* rule in antitrust enforcement. These ideas have been refuted based on a set of empirical tests. It was one of the key factors removing the “structure–conduct–performance” approach from the foreground of industry studies.

During the first decades of antitrust law (the beginning of the 20th century), a high market share was sometimes considered to provide a sufficient basis for the qualification of monopolistic power and for this power as being illegal. At least some court decisions (e.g., *Northern Securities*, *Standard Oil*) in the United States in the early 20th century suggest the prevalence of this approach (Armentano, 1999). Arguments favoring the actions of companies with a high market share were simply disregarded by the courts (Piriano, 2007), probably due to populist responses to the fear of large companies. In the 1930s, some researchers sought to prove the idea of much more complex relations between market concentration and market conduct (Vernon Mund), but they failed to out-perform the leaders of their opponents—Edward Chamberlin and Joan Robinson (Salerno, 2004).

In the 1970s, the Harvard approach came under severe criticism from the Chicago school. Many concepts of the Chicago school relied on two common presumptions: (1) large companies and actions traditionally qualified as restrictions of competition may lead to efficiency increases; (2) many actions viewed

¹¹ We do not analyze in detail the development of IO or the contents of discussions between different schools directly related to antitrust. This issue was examined by Schmalensee (2012) in a paper devoted to IO evolution in the 20th and early 21st centuries.

as tools to restrict competition (above all, vertical restraints) in reality may have no such implications. It is up to special analysis in each particular case to establish any negative consequences (rule of reason instead of *per se* rule). Within the framework of this particular period application of the rule of reason was obviously rapidly increasing.

The use of the Chicago school as a conceptual basis for antitrust law enforcement had two types of implications. On the one hand, particular decisions on antitrust law enforcement became more substantiated from the economic point of view. On the other hand, the deterring effect of the antitrust law became weaker due to possible lowering of the predictability of its enforcement under weak standards of economic analysis. This means that SCA probably does not include multi-level complex capabilities that provide strong compliance with antitrust law requirements. However, what requirements could be made for SCA if there was no clear content of antitrust bans and standards to prove guilt or innocence and, consequently, no clear boundary between zero sanctions and multimillion-dollar equivalent fines or even imprisonment for company officials? One possible guess is a situation-specific dynamic capability to manage business-to-business and business-to-government relations to mitigate the antitrust risks mentioned.

At the same time, it is quite indicative that despite a considerably lower level of assumed antitrust intervention, the Chicago school approach was also heavily criticized from the perspective of AE, as well as from the Harvard approach. Richard Posner and Robert Bork were severely criticized for their inconsistency to protect market institutions. From the perspective of the Austrian school, those authors' position, specifically in the sphere of antitrust policy, contradicted their position in other fields (Block, 1994). AE considers antitrust policy redundant, while the Chicago approach merely points to the need for more precise qualification of the market players' practice in concrete cases.

From the Austrians' point of view, even though the Chicago approach uses an explanation of the market operation that competes with the Harvard research tradition in IO, it basically stays within the framework of the same working model of individual choice, and consequently, of interactions. The most vivid example is the optimism of the Chicago school with respect to contestable markets, where the absence of entry barriers does not allow an incumbent firm to generate profit on the market even if there are no opportunities at each given moment for loss-free functioning of two or more firms on the same market (condition of costs sub-additivity).

The Post-Chicago approach seems to be even less acceptable for AE. This approach based on a new methodology in a certain sense restores the conclusions of the Harvard school—at least partially. As an example, let us recall the theory of vertical restraints. The Harvard school qualified them as a way to strengthen the producer's monopolistic power on a related market. The antitrust cases used the approach of unlawfulness of agreements restricting competition *per se*. The authors of the Chicago school have demonstrated that exclusive contracts cannot restrict market entry and therefore market competition. A number of later (Post-Chicago) models show that the restriction of competition by vertical restrictive contracts is not an inevitable consequence but is nevertheless quite possible under certain circumstances.

From the perspective of the Post-Chicago approach, there are many agreements and actions, the effect of which does not allow their lawfulness or unlawfulness to

be presumed. An in-depth analysis of the conditions and expected consequences of the use of agreements is needed. From the perspective of the Austrian school, that approach is based on excessively optimistic attitude to obtaining and qualified use of knowledge in decision-making. This particular possibility is doubted by the Austrians. There is a conflict of interest for each party in the interplay of research programs. The reason is almost self-evident: the evaluation of opportunities to explain and predict depends crucially on the assumptions and tools implemented. This is the real challenge to overcome.

7. Conclusion

The answer to the question in the paper's headline is in fact the answer of an "informed optimist": firms' SCA are closely related to dynamic capabilities, which in turn are necessary conditions for success in competition as a process. This is the case because identification and exploitation of new opportunities for business is in fact another aspect of the discovery of new resources (in the DCT sense as well) and the discovery of new ways to use familiar resources. At the same time, the closeness of the fundamentals of the two theories is not sufficient for their merger according to the principle of simple complementarity: AE—market, DCT—the firm. The main obstacle is still the difference in conceptual frameworks.

The significance of competition for economic development is not disputable for AE or competing NCE and now—especially—NIE as research traditions. Evolved and exploited dynamic capabilities are another side of competition in terms of firms' actions and interaction. There is a common understanding of the need to protect competition. However, the competition protection methods used in the context of those approaches differ significantly due to serious differences in the operational and conceptual interpretation of competition. At the same time, these methods are not invariant to content and ways to develop relevant dynamic capabilities.

According to AE, relevant information is generated and transferred precisely within the framework of competition as a process and is not available *ex ante* for agents, even for very experienced ones. In practice, this means that it is impossible to functionally use something that turns out to be an *unforeseen and unintended* result of interaction for the purposes of explaining an economic agent's conduct. This is why it is inexpedient to consider competition on the basis of models where pricing and output decisions are made. There is an important implication for DCT in the form of a question: whether this fact is somehow reflected in organizational capabilities to adapt and/or influence a local (regulatory) environment.

To understand the content of competition from the perspective of AE, it is important to see the demarcation line between ignorance and knowledge, how it changes and how (or whether) differences in peoples' alertness ensure the movement of the economic system toward equilibrium. Unexpectedness, unpredictability of particular competition results, both for politicians and for market actors themselves, are necessary conditions for skepticism of the very possibility to predict product, technological and organizational changes in detail. However, this does not mean an absence of opportunities to develop and study firm-specific capabilities to initiate and sustain these changes as a way to ensure SCA.

In the world of structural uncertainty, dynamic capabilities might demonstrate advantages over capabilities that are in fact pseudo-dynamic.

Hence, there is skepticism concerning the possibility of enforcing norms to protect competition by the state, on the one hand, and skepticism regarding opportunities to explain in advance and in detail the particular content of SCA in the system of “value creation—distribution (rent-seeking)” coordinates. This skepticism is fully relevant for antitrust regulation as well. NIE, in turn, sees fewer grounds for government intervention under the pretext of restrictions of competition by market players compared to the Harvard school as the basis for applying antitrust legislation, but does not fully deny antitrust policy opportunities. This is the fundamental difference between AE and NIE regarding the possibilities of competition policy.

The comparison of AE with NCE and NIE shows the difference in the views on the limits of the permissible in the activity of the government. For some type of cases the inexpediency of government intervention is presumed. One example is block exemptions as a particular form of the rule of reason. For other cases this presumption becomes imperative. It is for the reason of much greater proximity between AE and NIE as opposed to NCE that we might expect dramatic discussions of the details of both competition and antitrust policy between the NIE and AE strands of economic thinking.

Antitrust policy is not an exception among other manifestations of government activity criticized by AE. Is this position regarding competition and antitrust policy a matter of faith or knowledge based on experience? The answer is as simple as conducting a decisive experiment (following Imre Lakatos) for the purpose of establishing truth in rivalry of different research programs. In all likelihood, from the positive theory perspective, these approaches do not compete at all, because they examine different issues. However, even if this is the case, direct contradictions in the regulatory sphere, especially in the normative context, are not only unavoidable but mostly evident.

Further discussion of the differences in the understanding of dynamic capabilities, competition, competition policy frameworks and possibilities of different research programs envisions the solution of an important methodological problem. In fact, this problem was highlighted at the very beginning of the article: a *simplified understanding of the essence of competing concepts creates the grounds for discussion not with real intellectual opponents, but with phantoms on all sides of the discussion*. Debating each particular problem, it is necessary to agree (or at least clarify the residual differences) on the concepts used and their definitions—if not from a normative perspective, then at least from a positive one. It also becomes a challenge for the methodology of economics to find tools and ways to transform the dialogue between the blind and the deaf to a dialogue between those who possess the power of speech and sight.

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