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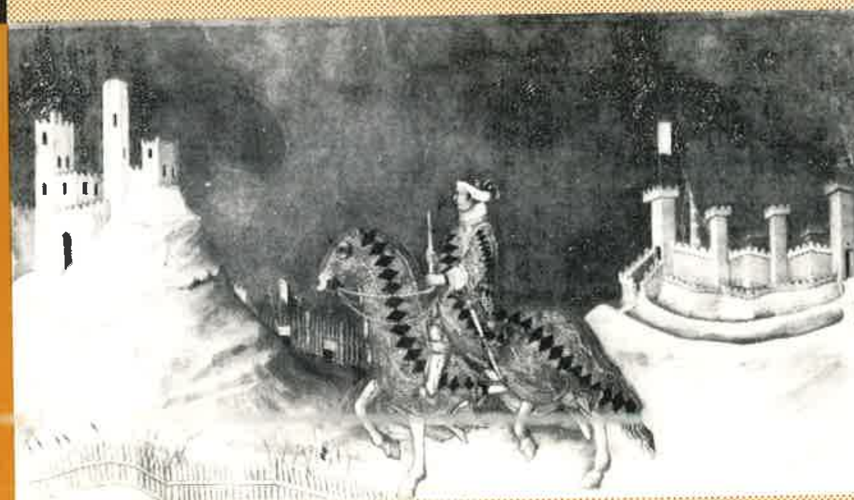
THE ROLE OF THE MARKET IN A COMPLEX INSTITUTIONAL ORDER



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Maurizio Franzini

THE ROLE OF THE MARKET IN A COMPLEX INSTITUTIONAL ORDER

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Introduction*

During the last two decades economists have put forward several novel arguments which run against the time-honoured idea that the market can do (almost) everything.

Transaction costs and asymmetric information have allowed to disclose other forms of market failures. In particular, the New Institutional Economics has convincingly argued that the market can be highly inefficient from an organizational point of view and that this is the key for understanding the complexity of the institutional order we live in.

Despite these valuable insights, we still lack - somewhat surprisingly - any coherent framework (not to say a fully fledged theory) for analyzing the role the market does (or should) play in an economic system characterized by a high degree of complexity. This paper offers some arguments in the direction of setting up such a framework. In particular it suggests that from authors like Hirschman, Bowles-Gintis and Williamson come suggestions which - if properly reformulated and combined - can be of great help in the analysis of a fundamental problem: the relationship between the market and the firm.

1. The rivalry between the market and other institutions in the New Institutional Economics

The New Institutional Economics (NIE) , in its various branches, has remarkably contributed to weaken the thesis according to which the market is in itself able to ensure an efficient coordination of the whole economic activity. By using the notion of transaction costs and by overcoming the simplistic state-market duality, which characterized the literature on market failures, the NIE provides a number of elements useful to explain the complexity and variety of the institutional order prevailing in the economic system.

The scholars' attention has been - rather obviously - drawn by the NIE's analysis of the firm; however, the lack of interest

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towards the NIE's conception of the market is perhaps to be criticized. In the relevant literature it is undoubtedly impossible to examine the firm without formulating fairly accurate hypotheses on the market and its relationship with the other institutions. Thus, as these hypotheses are often implicit or kept in the background, my aim is to bring them to the fore, so that it will be possible to give a first evaluation of their adequacy to define the role of the market not in the simplified world of traditional theory, but within a complex institutional order.

The transaction is the basic analysis unit of the NIE and, in general, of the whole economic organization theory. Although the notion of transaction itself is not straightforward[1], a good approximation is to be found in the definition given by Milgrom and Roberts (1992, 21):

> a transfer of goods or services from one individual to another.

According to the NIE - and, in particular, to the Transaction Cost Economics , originated by O. Williamson's works - a given transaction may take place within different institutions and the way in which transactions are actually organized is determined, on the one hand, by some of their characteristics and, on the other, by the ability different institutions have in minimizing the costs of their running.

Among the attributes of transactions, the most important in this respect is the specificity degree of the assets involved. As is well-known, specificity refers to the loss of value an asset would incur in if it were to be employed for uses different from the current one. Those who possess a very specific asset, risk to incur in heavy losses were their counterpart to exit the relationship[2].

Market is, therefore, one of the possible forms of organization of transactions. Indeed, the organizational level is the aspect of the market wherein new-institutionalists are mainly

[1]See Kay's (1992) critical remarks and Williamson's (1992) replies.

[2]Transactions also take on other important characteristics. A fairly exhaustive list was formulated by Milgrom-Roberts (1992, 30); in addition to specificity of the investments, this list also includes frequency and duration, complexity and uncertainty, difficulty of measuring performance and connectedness with other transactions. Notwithstanding the explanations put forward by the authors, it seems however doubtful that all these attributes can be referred to transactions and not to the institutional context in which they take place. This issue, though, is of secondary importance to the purposes of the present paper.

concerned. This straightway leads to the conception of market as a contract. Williamson sees market as a "classic" contract which - according to Macneil's definition - has the following main property:

> sharp in by clear agreement, sharp out by clear performance.

It is thus correct to characterise market as follows:

> 'Thick' markets are ones in which individual buyers and sellers bear no dependency relation to each other. Instead, each party can go its own way at negligible cost to another (Williamson 1991, 271).

This quotation has two important aspects. First of all, the importance given to the lack of dependency confirms - although indirectly - that anonymity of relations is one of market's characteristics. In addition, the reference to the possibility to "exit" without causing losses to one's counterpart (and, presumably, without incurring in them) shows, on the one hand, that Williamson considers market as a very short-term contract, subject to the risk of abrupt interruptions, and, on the other hand, that he is implicitly referring to markets in equilibrium. As it will be explained later, only if markets are in equilibrium (and there are no other forms of rationing) it is possible to exclude that the "exit" does not entail any cost.

NIE's basic problem - especially in its TCE version - is to identify the characteristics of transactions whereby the latter can be efficiently organised - by bearing minimum transaction costs - within the market[3].

It is thus clear why the NIE holds that there is rivalry, rather than complementarity, between the market and other institutions, and in particular between the market and the firm. Any single transaction, in fact, can be allocated only to one institution: either the market or the firm. The strength of this argument cannot be evaluated independently from the nature of the resources

[3]For example, transactions involving specific assets require contracts different from market ones, due to the risk of incurring in heavy losses.

involved in the transaction; in other words, it matters whether they are human rather than physical.

When physical resources are involved the rivalry thesis can be argued along the lines set by the literature on vertical integration. The argument is simple: if a firm comes to be vertically integrated with another, a market transaction will disappear. Rivalry here is quite evident, even if the relationships existing between vertical integration and theory of the firm are far more complex than what is generally assumed[4]. In this respect, it is interesting to note that, according to the New Property Right School (Hart-Moore 1992; Hart 1991; Moore 1992), vertical integration can be considered as a centralisation of property rights. More precisely, it consists in attributing the right of use of given resources to a single subject, excluding everybody else. By following this line of reasoning, the firm - unlike the market - could be seen as a form of centralized property on a collection of assets.

When transactions involve human resources - and the society in question is not based on slavery - the possibility to acquire the property of such resources is completely void of meaning. The choice cannot be between transactions wherein workers belong to themselves and transactions wherein workers belong to others.

In this case a different argument is needed. Coase has provided it in his pioneering work and has recently reproposed it (Coase 1937, 1991). Organisations coordinated through a conscious management activity (such as the firm) and organisation wherein, on the contrary, coordination through prices (i. e., the market) prevails can be considered as mutually alternative.

As in this paper labour relationships are paid considerable attention, the latter conception of rivalry between the market and the firm will be referred to. I shall argue that there are several reasons for criticizing such conception. One of them, perhaps the most important, is based on the influence that "exit" - regulated by the market - can exert on the running of the firm.

[4]In particular, to demonstrate that renouncing to a market transaction is convenient is not the same as to demonstrate that resorting to an organization such as the firm is convenient. It should be noticed that in the text it was assumed that firms were already existing, they do not take shape - with their peculiar organizational structures - as a consequence of vertical integration.

2. The possibility of exit and the running of firms

At the basis of the new-institutionalist theory of the rivalry between the firm and the market there lies the conception of market as a contract, rather than as a form of competition. In fact, there may be many complementarities between the market and the firm. Some of them were shown by Hirschman in his famous *Exit, Voice and Loyalty*. This section focuses on a brief critical study of Hirschman's main theses.

As I have said, human resources, unlike physical resources, cannot be vertically integrated, and their property cannot be either transferred or centralised. For this simple reason, exit from transactions involving human resources is always possible, although the costs involved may vary. Most economists seem to find conspicuous the advantages obtainable when exit is as free as possible. In particular, it has been maintained that such an ample degree of freedom would prevent the creation of positions of power, thus reducing economic rents to zero[5]. As I shall state in the following section, this concept also stems from the assumption that transactions have certain desirable properties and that, for this reason, they can be defined as "simple".

Hirschman (1970, 1982, 1986) criticised this approach by suggesting two interrelated theses. On the one hand, he argued on the validity of the idea that resorting to the exit is always the best possible strategy; on the other hand, he stated that there could also be some disadvantages in a too effective exit mechanism. As to the former thesis, it is enough to remind that Hirschman attributes considerable merits also to "voice", which he defines as (Hirschman, 1970, 30)

> any attempt to change, rather than to escape from, an objectionable state of affairs.

As to the possible damages caused by a too quick exit, it should be noticed that Hirschman's analysis is based on the following assumption (Hirschman, 1970, 3-4):

[5]The advantages entailed by freedom of exit are remarkable also with reference to issues outside the economic field. For example, Lowenberg-Yu (1992) state that there is a relationship between freedom of exit and equity of constitutional law.

> The performance of a firm or an organization is assumed to be subject to deterioration for unspecified, random causes which are neither so compelling nor so durable as to prevent a return to performance levels, provided managers direct their attention and energy to that task.

Hence, it follows that if consumers or workers were to quickly leave the firm, the latter would not have the time to remedy its mistakes[6].

Hirschman's thesis is, thus, that there are important links between the market and the firm. In particular, he seems to hold that an excessive strain of the market on the firms hinders the latter's smooth running. Hence, a firm-market link different from rivalry comes to the fore. Hirschman's theory can be supported; however, it is based both on shaky analytical grounds and on often unclear hypotheses. This prevents the reader to appreciate his theory's degree of generality. Hirschman's thesis shows three main limits.

The first weak point consists in the fact that Hirschman himself seems - at times - to forget the previously mentioned assumption of his own analysis. According to this assumption, there are no reasons for conflict between individuals (either consumers or workers) and organisations. This is perfectly coherent with a concept frequently used by Hirschman, i. e., that the voice is preferable to the exit since it gives the management more information. In this context, neither the voice nor the exit are relevant to the type of sanction that will arise; in fact, there is no reason for any type of sanction to exist. It is thus surprising to see how Hirschman attempts to apply his scheme also to clearly conflictual situations based on assumptions different from the ones he maintains - such as, for example, the existence of opportunistic economic agents[7].

A second weak point consists in the lack of foundations of a crucial assumption of his work, according to which adjustment of the organisation one belongs to is preferable to exiting and joining

[6] In fact, a similar problem could also arise in the case of a too loud "voice".

[7] An extremely significative example - although one out of many - is the attempt to criticise Williamson's theses on the superiority of hierarchies by using the notion of "voice" in a broad sense (see Hirschman 1986).

another organisation. Obviously, this assumption is somewhat plausible, but it is also too vague to formulate sound an general conclusions.

The third unsatisfactory aspect arises from the difficulty to establish whether a number of statements by Hirschman take on a positive or a normative meaning. In many instances, Hirschman makes use of his categories in order to interpret actual political and economic phenomena; in other occasions, he seems to be referring to the history of ideas, and namely to the way in which market was historically conceived; in some others he makes use of his own approach to give recommendations - such as those concerning the role to be attributed to the market - which are not generally accompanied by details on how to put them into practice.

The main consequence of all these weaknesses is that it is not easy to establish the range of viability of many of Hirschman's statements. A supplementary analysis is thus needed, especially if we are to interpret Hirschman's work not only as a mere contribution to the history of ideas. The factors whereupon individual convenience to exit depend and the reason that make exit more or less convenient should be pointed out, along with the assumption on the degree of opportunism of the various economic agents. It would also be important to highlight the information these agents possess. For example, do consumers know the reason for the deterioration of the organisation's performance, and do they know - at no expense - the alternatives at their disposal?

In fact, it is not difficult to figure out situations wherein the existence of - even minor - barriers to exit may lead to socially dangerous results. For example, with reference to the relationship between consumers and firms, Diamond (1971) showed that if consumers' exit is hindered by the existence of information costs - and if other reasonable conditions are in effect - an equilibrium wherein the firms achieve the joint maximisation of their profits is to be reached. In other words, the economy ends up in a situation identical to monopoly.

The reasons for a larger or narrower recourse to exit are therefore very important, as is the possibility that any eventual obstacle may be employed by agents endowed with strategic rationality. In this respect, it is interesting to quote the following remark by Miller (1992, 73), referring to the work contract and concerning the famous "$-5-a-day" case which took place at Ford Inc. about 80 years ago:

> It is true that the employment relationship is a voluntary one and that exit is available to those who prefer an alternative. However, the policies at Ford were clearly designed to make exit costly.

The eventuality that obstacles to exit could be the result of a clearly strategic behaviour is not given adequate attention by Hirschman[8]. Nevertheless, it is an extremely interesting hypothesis, since it allows an approach - different from Hirschman's - to the study of the relationships between the market and the firm. In particular, this eventuality suggests that market can be subordinated to firms' needs. This subject is to be dealt with in the following section.

3. Market as a discipline device and transaction costs.

Labour market models based on the efficiency-wage hypothesis are now frequently found in handbooks of economics and are thus well-known. The fundamental hypothesis on which such models are based - i. e., the fact that workers' efficiency depends on the wage they earn - may be explained in different ways. Shapiro-Stiglitz's paper (1984) includes the first example of an efficiency-wage model in which moral hazard - considered as workers' shirking - is crucial. Shirking, when there are no effective exogenous mechanisms of enforcement, does not allow wages and employment to reach the values corresponding to Walrasian equilibrium. Involuntary unemployment is explained on these grounds.

In the present paper I do not want to deal in depth with the analytical problems connected to the above explanation of

[8]Outside the economic field there are, of course, significant examples of the strategic use of exit. Just think at criminal organisations, whose aim is to make exit virtually impossible to their members.

voluntary unemployment[9]. My attention is rather centered on the conception - originating from these models - of markets as discipline devices.

As is well-known, unemployment - interpreted as a lower than one probability to find a new job in case of dismissal - can be considered as a sanction which - together with the monitoring activity carried out by firms' management - is able to discipline workers, thus limiting their opportunistic behaviour.

When seen as a discipline instrument, the market reproduces the way the judiciary acts. Detection aimed at identifying shirkers is carried out by the policeman-management, and the punishment is inflicted by the market-judge in the shape of unemployment. It is clear that, at least in principle, other forms of "punishment" would be possible, such as a permanently lower wage for the shirker who were to be discovered. However, due to a number reasons which can be more or less shared - this hypothesis is not taken into account by efficiency-wage models.

It is also evident that, unlike the judiciary, the market cannot obtain a refund for the damages caused from those who have been found guilty. For this reason, market is not an adequate discipline device when huge advantages are obtained (and serious damages inflicted) in a short time, and when it is possible to avoid punishment by voluntary exiting the market.[10]

The main reason why the economists are interested in efficiency-wage models undoubtedly consists in these models' ability to explain involuntary unemployment. Bowles and Gintis, led by their attention towards institutional issues, have rightly emphasised the new conception of market emerging from these analyses. Their attempt to provide a general interpretation of markets (not only of the labour market) as disciplinary elements lays on the notion of "contested exchange", which is defined as follows (Bowles-Gintis forthcoming):

[9]In my opinion, the most significant analytical problems do not only concern the possibility of explaining of the cyclical trend of wages and employment on the basis of this model, but also - and perhaps above all - the dynamic process leading from the efficiency wage within a single firm to involuntary unemployment.

[10]In this case, the loss of one's job has on the worker the same effect the failure to be re-elected has on a politician who decided to leave the political scene.

> ...the terms arising from exchange are not generally enforceable at zero cost to the exchanging parties. Where some aspect of the good or service supplied is both valuable to the buyer and costly to provide, the absence of third party enforcement of claims gives rise to endogenous enforcement strategies. We refer to this relationship as a "contested exchange".

On the basis of this definition, Bowles and Gintis hold that a disciplinary function does not merely attain to the labour market, but also to the credit and goods markets. With reference to the latter market, they state that (Bowles-Gintis forthcoming):

> ...their (consumers) implicit threat to switch suppliers if dissatisfied induces firms to supply high quality products.

This remark is not enough to put the labour market - at least in the way it is analysed by the shirking models - on the same level of the market of goods. It is worthwhile to analyse the problems here entailed also because this will clarify the important links among transaction costs, obstacles to exit and market disequilibrium.

The basic issue is whether markets - in order to perform disciplinary functions - are necessarily to be in disequilibrium. In other terms, it has to be established whether discipline entails substantial "exit" costs. In more than one occasion, Bowles and Gintis seem to give an affirmative answer to this question. However, with reference to the market of goods, the simple remark that consumers can "switch suppliers if dissatisfied" is not enough to exclude that market may reach an equilibrium position. All things considered, A. Smith's "invisible hand" can be interpreted as a discipline device not requiring endogenous enforcement and - at the same time - ensuring all mutually advantageous exchanges, that is, ensuring equilibrium.

If transactions are - so to say - "simple", then even a market in equilibrium can perform disciplinary functions. In order for a transaction to be considered "simple", the following two conditions are necessary - although not sufficient: (a) each party of a transaction is able to monitor the performance offered by the other party at zero cost (for example, in the case of consumers, product quality); (b) whenever the performance differs from what established in the contract, each party can sanction the other at zero cost (typically, by exiting the deal).

If transactions were "simple", then the "invisible hand" could ensure both individual interest and social welfare at the same time. All mutually advantageous transactions would take place, since each agent would feel shielded against the others' opportunism. It is necessary to stress once again that all this would happen without any exogenous enforcement or market disequilibrium[11]

If monitoring and/or sanctioning are costly, the "invisible hand" ceases to work miracles, and either endogenous enforcement or markets in disequilibrium are necessary. There is thus a strong link between transaction costs and the necessity for markets to be in disequilibrium if the latter are to perform disciplinary functions. This link is undoubtedly considered in the work by Bowles and Gintis[12], although it is not given due importance. As a consequence, the distinction between discipline as a market property *tout court* and discipline as a property of markets in disequilibrium remains in the background. In my opinion, it is very important to highlight this fact for many reasons.

First of all, this is important because in the literature on the firm there are theories that consider markets in equilibrium as disciplinary instruments even as regard transactions which are not "simple" in the sense they have been previously defined. The connection between transaction costs and markets in disequilibrium allows one to distinguish between models of the type formulated by Bowles-Gintis and those of the type formulated by Fama (1980), giving rise to serious doubts as far as the latter are concerned.

Secondly, market in disequilibrium can be considered as an institution of its own, different from market in equilibrium. The

[11]This interpretation of the "invisible hand" is neither the only one possible nor the most frequent. For example, Bowles and Gintis tend to associate endogenous enforcement with the "invisible hand"; accordingly, enforcement problems are never dealt with by interpretations such as the new-Austrian one, which is based on non-intentional advantages coming from the pursuit of individual interest. For a criticism of this conception, see Sen (1983).

[12]See Bowles-Gintis (1990, 1777). Note also that their definition of "contended exchange" quoted above begins with a reference to transaction costs.

NIE does not make this distinction, and this may have remarkable consequences as regards the validity of many of its conclusions. This issue will be dealt with in detail in the next section.

As Bowles and Gintis rightly observe, if markets are in disequilibrium due to transaction costs - and, in particular, due to the costs involved in the issuing of sanctions, according to the assumptions of shirking models - prices do not only reflect relative scarcity and do not merely perform the function of allocating supplies. Indeed, prices also incorporate what Bowles and Gintis call "enforcement rents". These rents, according to their definition, arise because (Bowler and Gintis, forthcoming):

> it is generally suboptimal for an agent facing an enforcement problem... to make an offer equivalent tot the trading partner's next best alternative. Should such an offer be accepted, the partner will be indifferent to the continuation of the exchange and there would be no means of using the threat to terminate the relationship to enforce the terms of exchange.

Bowles and Gintis' enforcement rent, therefore, can be seen as an actual exit cost. In this sense - by following the precisely formulated distinction between rents and quasi-rents suggested by Milgrom-Roberts (1992, 269) - it would be more appropriate to speak about quasi-rents. Indeed,

> A quasi-rent is the portion of earnings in excess of the minimum amount needed to prevent a worker from quitting his or her job or a producer from exiting its industry. Whereas rents are defined in terms of decisions to enter a job or an industry, quasi-rents are defined in terms of the decision to exit.

Apart from purely terminological problems, it is important to observe that prices have also the function of making exit costly. A shift of prices away from equilibrium values can be considered as the first appearance of the costs originating from "complex" transactions. The other appearance of such costs is - of course - unemployment. Markets in disequilibrium and rents (or quasi-rents) are therefore to be considered as consequences originated from a single cause: transaction costs.

Placing maximum emphasis on transaction costs allows one to see some of the limits of Bowles and Gintis' conception of "power". After having duly warned that the notion of "power" does not lay on solid ground, the two authors state that "power" consists in

> the ability to furthering one's interests by imposing ... sanctions on another agent when the converse is not also true.

If it is allowed to criticise a definition without supplying a better one, I would like to express my perplexity on Bowles and Gintis' definition of "power". With reference to the shirking model, let us suppose that some of the unemployed were to decide to emigrate. The unemployment rate lowers, as well as discipline, and it becomes necessary for firms to increase wages. It is possible, on the basis of Bowles and Gintis' definition, to state that workers have power with respect to firms? If unemployment is considered as the "initial stage", the firms cannot further "sanction" the unemployed, therefore, the answer to the above question should be yes.

I think that the problem is that one cannot speak of "sanctions" in absolute terms; a judgment on "sanctions" and on their links with "power" depends on the judgment given on the starting point. "Sanctions", as well as "power" are relative concepts; it is necessary to be more explicit on the reference terms adopted.

When there are transaction costs, an appropriate reference could be a world wherein property rights were distributed so as to minimise these costs. Each deviation could be interpreted as "power" of those who take advantage of it. The use of this terms seems to be justified if it is possible to hypothesise the existence or feasibility of a constitutional phase in which those who are benefited can hinder the achievement of the efficient solution. Obviously, these remarks have no pretension to solve the problem of "power".

I am going to conclude the present section. From the point of view of institutional analysis, the main contribution of the shirking models consists in having held that - when there are "complex" transactions and opportunism - the competitive process modifies, and the position towards which the market tends is determined by the need to control opportunism. Contrary to Hirschman's approach, the circumstances whereupon the possibility or convenience to "exit" depend are identified with certainty. In these models, indeed, "exit" costs are endogenous, and their function is namely that of allowing organisations to function at best. Thus, the organisations' need conditions the way the market operates; Hirschman's attempt to establish the optimal "exit" seems to be solved by the spontaneous functioning of the competitive mechanism.

In fact, the solution emerging from the shirking model cannot be considered as optimal without further analyses and comparisons[13]. Moreover, such model cannot be taken to represent an exhaustive analysis of the complex relationships between market and organisations.

The possible connections between market and "influence" costs - which are considered by Milgrom and Roberts as characteristics of the organisations - are not examined, and no role is attributed to "voice" (for example, the "voice" of unemployed workers). Moreover, these models do not consider all the possibilities of "exit".

Previously emigration has been mentioned; now he possibility of exiting the status of salaried worker can also be added. This possibility largely depends on how the capital market works; if this market were in equilibrium, shirking models should very likely have to be re-formulated. Obviously the authors suggesting such models - with particular reference to Bowles and Gintis - are well aware of the fact that capital market is not in equilibrium, and can also put forward sound explanations in this respect; however, the link between the way this market works and costs of "exiting" the organisations is neglected.

Despite these limits, shirking models provide a remarkable contribution to the economic analysis of institutions, while singling out some weak points of the NIE.

[13] In this respect it should also be noticed that opportunism is not to be found only within the firm, and that, according to many, this is not its main characteristic. It is thus necessary to be cautious in interpreting these models as representative of the firm and its relationships with the labour market.

4. The complex role of the market in a complex institutional order

In Williamson's definition of "thick markets" previously quoted, there is a reference to the possibility of "exit" at negligible costs. The remarks given in the above section should allow us to fully understand the importance of such reference. Williamson, as well as most NIE economists, assumes markets in Walrasian equilibrium as terms of reference; in these markets "exit" costs equal to zero and, consequently, there is no quasi-rent. For the sake of simplicity, it can be stated that the main reason why the NIE does not consider market as an adequate governance structure with respect to given transactions namely depends on the assumption that market cannot shield one party from the damages caused by the easy exit of the other.

In order to illustrate this statement, it is necessary to consider specific assets, which play a role of primary importance within the NIE. As I have already said, an asset is specific to a use or a user when a loss of value would result if it were to be employed for alternative uses (or by other users). The owner of specific assets or, more generally, that who has to decide whether to invest in specific assets, is interested in establishing a long-lasting relationship with the owner of the resource/asset with reference to which his own specificity has a value. Accordingly, the latter could be interested in opportunistically exploiting the advantage he enjoys. This advantage lays in the possibility of "exiting" at negligible cost.

The main reason why institutions other than the market are necessary is, according to the NIE, just this: the market does not make exit costly, and therefore does not give the opportunity to exploit the advantages coming from long-lasting relationships. All that is in contrast with the conclusions reached by shirking models. Indeed, these indicate that, given the existence of "complex" transactions, competition may take on different shapes and lead the market towards a disequilibrium position, wherein exit is "costly".

The NIE neither provides any analysis of competition when "complex" transactions are involved, nor considers the eventuality that from such an analysis may originate a new institution: markets in disequilibrium. This has remarkable consequences on the approach to major issues concerning the economic analysis of institutions. I shall briefly examine some of these consequences.

The first issue concerns specific assets and the role competition may play in controlling the opportunism they generate. As previously mentioned, the trading partner of the owner of specific assets is in a position of advantage that can be opportunistically exploited. This advantage originates just in the moment when a specific investment is effected, as a consequence of what Williamson (1985) calls a "fundamental transformation": a situation of competition is substituted by a monopoly. This leads to exclude that competition may play a role in the phase following the carrying out of the specific investment. Is this conclusion fully acceptable? And if competition is not able to give a solution to the opportunism problem, what are the alternative solutions and how do they work? Unfortunately the problem, as it is formulated by the NIE, is such that not even the suggested solutions - i. e., long-term contracts - seem to be thoroughly satisfying. In this respect it is useful to remind the well-know General Motors - Fisher Body case, which took place in the US in the 1920s[14].

Contractual agreements aimed at avoiding opportunism when specific assets are involved turned out to be inadequate with respect to subsequent market evolution. In other terms, the "exit" costs envisioned by the long-term contract turned out to be, *ex post*, inadequate in order to ensure the continuation of the relationship and the savings on bargaining costs.

In cases like these, vertical integration, if it is not too costly in itself, represents the best solution. However, it cannot be used when specific human resources are involved; in this case, exit is always a viable option.

Opportunism connected with assets specificity seems therefore to be more difficult to control if compared with opportunism linked to workers' shirking. The basic reason lays in the fact that - on the basis of NIE's hypotheses - it is not possible to issue credible sanctions against the opportunists. While in the

[14]Klein (1991) provides a recent interpretation of this case. This essay is interesting also because the author attempts to answer Coase's (1991) criticisms to firm theories based on assets specificity by taking into consideration namely the Fisher Body case.

labour market there are alternatives - and this makes the sanction of dismissal credible - in this case the alternatives are, almost by definition, inexistent.

However, it seems reasonable to assume that - mostly where rents are higher and the damage that opportunism may cause is therefore bigger - competition can multiply the opportunities available to the owner of specific assets. In other words, competition can determine the assets' specificity degree whereupon the extent of the damages opportunism may cause. The level of equilibrium of rents and quasi-rents would thus be determined endogenously. Within the NIE, instead, it constitutes an endogenous datum; a characteristic of transactions which is not modifiable and, as previously stated, constitutes the elementary unit of analysis.

The second issue I would like to examine concerns the relationships between the market and the firm. As it has been repeatedly stated, the rivalry thesis - held by the NIE - seems to be a logical consequence of the hypothesis that transactions themselves be governed by different institutional structures. However, especially when human resources are involved, numerous problems arise in the light of which the rivalry thesis appears to be partial and unsatisfactory.

First of all, the firm and the market - the latter considered as a discipline device - may coexist as structures governing transactions. As it has been previously shown, the market can determine the "exit" costs from the firm, which are crucial to the firm's good performance. This is true also independently from shirking: for example, if the firm, thanks to its management activity, is able to ensure a cooperative surplus, a too easy exit could hinder the achievement of such a surplus[15].

These remarks essentially refer to the relationship between the firm and the labour market. It is however possible to demonstrate their overall validity and the implications they have with regard to the analysis of problems wherein rivalry seems undeniable. Consider the alternative between the organisation of production through market relationships (mainly independent producers) or through management. I shall call this alternative -

[15]The approach shown in the paper could also give analytical value to most of Hirschman's theories.

which is that considered by Coase (1937, 1991) - "fundamental choice". In this case there seems to be a strong rivalry between the market and the firm. In fact, the problem is much more complex.

First of all, on the basis of what has been previously said, the choice seems to be between market on the one hand and firm plus market on the other. This seems to be an unavoidable conclusion if markets (mostly the labour market, but also the capital market) regulate the conditions of "exit" from the firms. Moreover, the existence of complementarities - i. e., ultimately, of connections between the running costs of the firm and "exit" regulated by the market - influences the results of "institutional competition". In other terms, if "fundamental choice" depends on the two institutions' running costs, the market - mostly seen as market in disequilibrium - can give the firm the opportunity to win its institutional competition against the market.

Conclusions

What role does (or should) the market play in a world dominated by "complex" transactions that the "invisible hand" is not able to regulate? In this paper I have tried to maintain that neo-institutionalism, with all its merits, cannot supply a convincing answer to this question. By combining this theory's best analytical acquisitions with Hirschman's notion of "exit", reinforced by - especially Bowles and Gintis's - idea that market is a discipline device, it is possible to make some steps forward in the analysis of the problem.

The new role competition can play, the opportunity to consider markets in disequilibrium as institutions in themselves, the complementarity between the firm and the market and their influence on the most important institutional issues are the most relevant issues which deserve further analysis.

In particular, it has emerged that the labour and capital markets play a crucial role in determining the possibilities of "exit" whereupon, in their turn, the firms' working costs and the degree of authority within the firms depend. An analysis of the role played by the market in a complex institutional order should

give these two markets a fundamental institutional relevance. This is an additional reason to judge as thoroughly out of date all the approaches considering these markets on the same level of all the others.

Of course, an exam of the new market functions cannot be exhaustive without considering the role played by the State. In this respect, a fresh reflection allowing analysts to go beyond the worn-out re-proposals of old - and not too convincing - recipes seems necessary. In particular, the remarks previously put forward and the reference to the "complex" character of transactions make difficult to deeply understand what is implied by the division of tasks between the State and the market fostered by Simons in his classical defense of *laissez-faire* (Simons 1948, 42):

> it is an obvious responsibility of the state ... to maintain the kind of legal and institutional framework within which competition can function effectively as an agency of control.

A clear indication of the tasks to be given to the State - or rather, of the aims of an institutional economic policy - are to be found in a passage dating back of "only" 150 years. The sentence which, significantly enough, concludes J. S. Mill's *Principles* is, even today, a challenge to economic theory. It will be advisable - also thinking of the market - to face this challeng more and more seriously.

> Even in the best state which society has yet reached, it is lamentable to think how great a proportion of all the efforts and talents in the world are employed in merely neutralising one another. It is the proper end of government to reduce this wretched waste to the smallest possible amount, by taking such measures as shall cause the energies now spent by mankind in injuring one another, or in protecting themselves against injury, to be turned to the legitimate employment of human faculties, that of compelling the powers of nature to be more and more subservient to physical and moral good.

References

Bowles, S.; Gintis, H. (1990), Contested Exchange: New Microfoundations for the Political Economy of Capitalism, *Politics and Society,* 18, pp. 165-222.

Bowles, S.; Gintis, H. (forthcoming), The Revenge of Homo Economicus: Contested Exchange and the Revival of Political Economy, *Journal of Economic Perspectives.*

Coase, R. H. (1991), "The Nature of the Firm": Influence, in O.E. Williamson and S. G. Winter, eds. *The nature of the firm. Origins, evolution, and development,* Oxford, Oxford University Press.

Coase, R. H. (1937), The Nature of the Firm, *Economica,* pp. 386-405.

Diamond, P. A. (1971), A Model of Price Adjustment, *Journal of Economic Theory,* 3, pp. 156-168.

Fama, E. F. (1980), Agency Problems and theTheory of the Firm, *Journal of Political Economy,* 88, pp. 288-307.

Hart, O. D. (1991), Incomplete Contracts and the Theory of the Firm, in O.E. Williamson and S. G. Winter, eds. *The nature of the firm. Origins, evolution, and development,* Oxford, Oxford University Press.

Hart, O. D.; Moore, J. (1990), Property Rights and the Nature of the Firm, *Journal of Political Economy,* 980, pp. 1119-1158.

Hirschman, A. O. (1970), *Exit, Voice and Loyalty,* Cambridge, Mass.,Harvard University Press.

Hirschman, A. O. (1982), Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble?, *Journal of Economic Literature,* 20, pp. 1463-1484.

Hirschman, A. O. (1986), Exit and Voice: An Expanding Sphere of Influence, in A.O. Hirschman, *Rival Views of Market Society and Other Recent Essays,* New York, Elizabeth Sifton Books.

Kay, N. M. (1992), Markets, False Hierarchies and the Evolution of Modern Corporation, *Journal of Economic Behavior and Organization,* 17, pp. 315-333.

Klein, B. (1991), Vertical Integration as Organizational Ownership: the Fisher Body - General Motors Relationship Revisited, in O.E. Williamson and S. G. Winter, eds. The *nature of the firm. Origins, evolution, and development,* Oxford, Oxford University Press.

Lowenberg, A. D.; Yu, B. T. (1992), Efficient Constitution Formation and Maintenance: The Role of "Exit", *Constitutional Political Economy,* 3, pp. 51-73.

MacNeil, I. (1978), Contracts: Adjustments of Long-Term Economic Relations under Classical, Neoclassical and Relational Law", *Northwestern University Law Review,* 47, pp. 697-816.

Milgrom, P.; Roberts, J. (1992), *Economics, Organization and Management,* Englewood Cliffs, New Jersey,Prentice-Hall.

Mill, J. S. (1848 -1987), *Principles of Political Economy,* London, A.M. Kelley.

Miller, G. J. (1992), *Managerial dilemma. The political economy of hierarchy,* Cambridge, Cambridge University Press.

Moore, J. (1992), The Firm as a Collection of Assets, *European Economic Review,* 36, pp. 493-507.

Shapiro, C.; Stiglitz, J. E. (1984), Unemployment as a Worker Discipline Devise, *American Economic Review,* 74, pp. 433-44.

Sen, A.(1983) , The Profit Motive, *Lloyds Bank Review,* 147, pp. 1-20

Simon, H. A. (1991), Organizations and Markets, *Journal of Economic Perspectives,* 5, pp. 25-44.

Simons, H. C. (1948), A Positive Program for Laissez Faire. Some Proposals for a Liberal Economic Policy, in H.C. Simons, *Economic Policy for a Free Society,* Chicago, The University of Chicago Press.

Williamson, O. E. (1985), *The Economic Institutions of Capitalism,* New York, The Free Press.

Williamson, O. E. (1991), Comparative Economic Organization: the Analysis of Discrete Structural Alternatives, *Administrative Science Quarterly,* 36, pp. 269-296.

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