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Recent Developments in the Theory of Markets with Imperfect Information

M. Şimandan

Matei Şimandan
Faculty of Economics
"Aurel Vlaicu" University of Arad, Romania

Abstract
This paper focuses on the interdisciplinary specific of markets with imperfect information and its applications in the analysis of different socio-economical processes. Distinctively, we discuss the contributions of Romanian researches in agency theory and agency relationships, decisional behavior in conditions of risk and uncertainty, the consequences of asymmetrical information on the economical crisis, the attitude towards risks and the means of counteracting imperfect information among actors who operate on different segments of the economy. The main conclusion suggested by this enterprise refers to the extension of the possibilities of explaining socio – economical phenomena & information.
Keywords: asymmetrical information, agency relationships, decision, uncertainty, risk.

Introduction

As in most sciences, the traditional approaches in the economical science were joined by research of an interdisciplinary type in the last decades. They determined the emergence of new means of investigating economical phenomena and processes, which combine economical analysis with mathematics, sociology, political sciences, law theory, psychology, game theory, philosophy, ecology, information theory, moral theory or education theory.

This tendency explains on the one hand, the configuration of new research directions which concern both the micro-economical level (the theory of human capital, the theory of asymmetrical information, the theory of property rights or the theory of imperfect competition) and the macro-economical level (the theory of rational anticipations, the theory of public choices, the theory general balance, the theory of open economy and the theory economical institutionalism). On the other hand, this tendency determined not only an extension of the research methods, techniques and procedures, but also an extension of the term of economical science to fields which are situated at the border of economy and the mentioned fields.

One such example is the theory of markets with imperfect information, grounded in the '70's by G. Akerlof, M. Spence, and J. Stiglitz. Three authors proposed a common explanation regarding asymmetrical information given the fact that some of the economical agents possess more information than others.

In his studies, Askerlot realizes that the phenomenon of adverse selection takes places when the person who sells a product or a service owns more information than the buyer. He gives the example of the market of second hand cars, where the sellers own more information regarding the quality of the transactioned good than its potential buyer. In the absence of a mechanism which could regulate the problems regarding information, there is the tendency of the sellers to promote products of inferior quality than those of superior quality and incomes thus obtained are externalized by all the sellers on the given market.

By analyzing the workforce market, Spence reached the conclusion that the level of education comes as a signal of productivity of people who intend to get employed. Since the employer doesn't have the possibility to distinguish the more productive people from the less productive ones, he is tempted to consider that those with higher education are more productive than those with less education. His subsequent research extended to the explanation of other types of signals on different markets: expensive publicity as a sign of productivity, stock emission as a signal of the negotiation ability, the decrease of prices of certain products as a sign of a firm's position on the market.

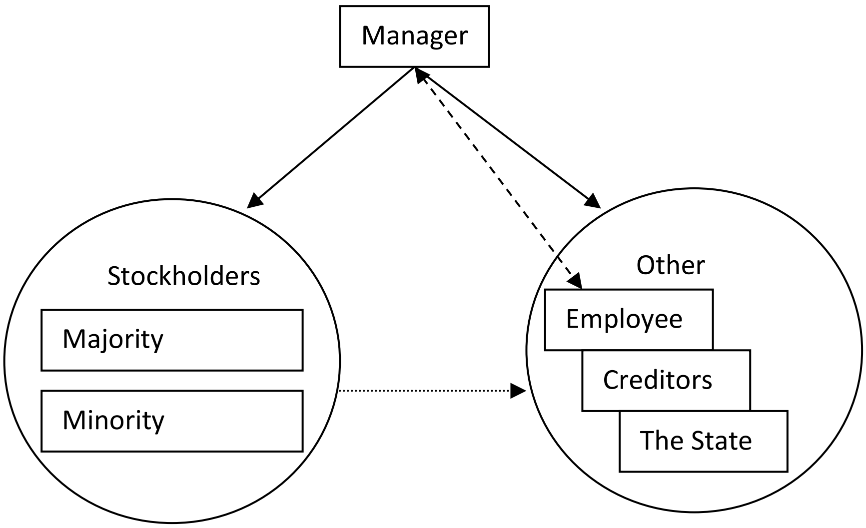
Last but not least, Stiglitz perfects Akerlof's and Spence's analyses with research on the behavior of economical agents who are not informed on markets with asymmetrical information. The example he uses is that of the insurance market, where insurance companies don't own information about the real risk undertaken by the asigurati. He shows how the insurance company (the misinformed part) to reveal information about their risks through screening. With the help of selected and filtered information, the insurance company distinguishes between the different classes of risk offered to their clients, thus giving them the possibility to choose from a list of alternative contracts, where small compensation can be replaced with high deductibilities.

Taking the discussion towards newer fields of applying the theory of markets with asymmetrical information, I will now present tho studies regarding the theory of agencies and of behavior in conditions of risk on the capital market.

Informational asymmetry in agency relationships and on the capital market

A study led by V. Robu and R. Sandu (2007) shows that the hypothesis of informational asymmetry quickly extended in financial theory, in agency theory and in agency relationships. Agency theory, for instance, offers a new perspective on the organization, with significant consequences at the level of financial communication. At its turn, the agency relationship appears when an enterprise entrusts the management of its own interests to someone else, without necessarily signing a contract.

The autors develop the idea of the users of financial and accounting information in the context of information asymmetry and agency relationships. They identify the following agency relationships between the users of financial and accounting information: informational asymmetry between managers and stockholders, between stockholders and employees, between different categories of stockholders, as well as a scheme of the relationships between the users of financial & accounting info, seen from the perspective of informational asymmetry and agency relationships, a scheme wich is reproduced in Fig. 1.



Legend:

Fig. 1. Informational asymmetry between different categories of users (adaptation after V. Robu & R. Sandu, 2007, p. 22)

In this scheme we can identify the following types of relations:

- A classical agency relationship, which is established between the shareholder and the manager, as well as between the manager and the other partners.
- A relation of informational asymmetry between the majoritary and minoritary shareholders, as well as between the shareholders and the other users of the financial and accounting information (majoritary shareholders, that is the shareholders' group representing the categories which benefit from information asymmetry through the quality of information offered and through its orientation towards the satisfaction of the information need).
- A bivalent relation of informational asymmetry between the manager and the employees; this relation involves two aspects: on the

one hand, the employee doesn't have access to complete information so as to be able to evaluate correctly the firm's stability, continuity and capacity of making payments; on the other hand, the employee benefits from informational asymmetry in the terms of the tasks he has to perform.

Another field of application of the theory of markets wits imperfect information is that of behavior in conditions of uncertainty and risk on the capital market, a field analyzed by Petru Prunea (2006). In the first part of his study, the author insists upon the fact that, at an individual level, the exchange of information turns into a transaction where the buyer doesn't know what he will buy under the aspect of information actuality and utility.

Among the characteristics envisaged by the author regarding the asymmetrical distribution of information, we should remember the following:

- Information is extremely variable in terms of credibility. This means that, on a decisional plan, at least two different things: not all information is equally correct; the information which was once correct can become outdated, thus incorrect.
- Obtaining information involves certain costs. That is why individuals aren't willing to pay the cost of information beyond the point where the marginal benefit is equal to the marginal cost obtaining the information.
- Oftentimes, individuals use only part of the information obtained because its processing is expensive. In this case, a rational individual will possess the information to the point where the marginal benefit is equal to the marginal cost of processing a higher cost of information.
- Not all individuals own the capacity to process correctly the obtained information. According to the principle of limited reasoning, individuals take rational decisions only on certain sequences of their activity, so we can't talk about rational behavior in its integrity.

Based on these aspects, P. Prunea (2006, p.88) suggests some criteria in choosing decisional strategies in conditions of uncertainty and asymmetrical information on the capital market:

- Identifying the type of uncertainty which characterizes the market in the given moment.
- Evaluating the quality of knowledge and information owned by the decisional factor.

- Taking into consideration factors which concern probability thinking: uncertainty, risk, indetermination, reasoning level, fluctuations etc.
- Discerning relevant information from that less relevant, in relation with the degree of information and the degree of specific culture, profitability as opposed to risk, as well as contagion.

Commercial transactions and means of counteracting asymmetrical information

The imperfect distribution of information was also studied as opposed to the risk in the field of commercial transactions. Nela Popescu (2004), for instance, analyzes the means of evaluating risks and the selection of alternatives by the decisional factors. In her opinion, the control of risk and uncertainty in the business environment where the firm activates involves the identification and classification of risks, as well as the validity of information regarding risks (Popescu, 2004, p.21). Since decisions are taken by people, the attitude towards risk inevitably reflects personal features, habits, work practices and the capacity to envisage the dangers involved by a certain risk, a situation portrayed in Fig. 2:

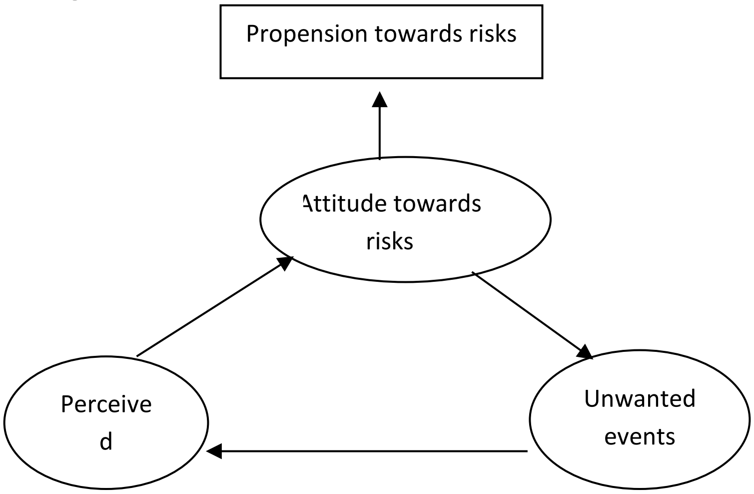


Fig.2. The attitude towards risks and its determinations
(Adaptation after N. Popescu, 2004, p.22)

Last but not least, the attitude towards risk and the relations between the risks assumed and the firm's economical performances can be found in the firm's policy regarding risk. The analysis of this risk refers to the organizational and strategic level, as well as to the functional level of the firm. The fundamental reason is a simple one: possessing information regarding the structure of risk, the real or potential difficulties of the given decisions will be able to be avoided, diminished and controlled.

In an attempt to perfect these ideas, D. Marin and S. Stancu (2007) identify a few ways of counteracting the lack of information, with a distinct reference to the judicial instruments elaborated with this purpose, as well as the type of behavior which can emerge in relation to these regulations. Summing up the discussion to its essential data, here are the most important aspects:

a) The guarantee certificates are the ones which transmit to the buyers the information that the products they buy are of good quality, the firms thus being able to practice higher prices, which reflect the quality of the products sold. However, the guarantees transmit this information only if they are credible. For instance, a guarantee is credible only if the buyer is convinced that the seller can be found and determined to honor his promise in the future. Generally, guarantees are offered only of the product's viability doesn't depend decisively upon the way in which the consumer uses the product. Contrarily, the buyer has the stimulant of using the product negligently and to appeal to the seller to solve the problem in the period of the guarantee. Thus, the moral risk is stimulation for the consumer to behave negligently, when the product is covered by a guarantee through which the buyers are obliged to solve the emerging problems.

b) The reputation or the brand of a product constitutes a factor which counteracts the effects of uncertainty regarding quality. For example, a shop or a producer can rely on his reputation to transmit a signal regarding the high quality of the goods or services offered. A shop which expects the individual to buy from him again if he offers quality goods has a strong stimulus not to offer low quality goods. On the other hand, reputation doesn't indicate only quality, but offers the consumer the possibility to return the good if it doesn't correspond to his expectations. Generally, on the market where the same consumers and firms operate regularly, reputation is easy to establish. On markets where goods are bought occasionally, reputation is more difficult to establish.

c) Experts, as the disinterested part of commercial relations can supply the consumers with more accurate information than the unauthorized people. For instance, if the buyer of an occasion car appeals to a dealer or to a mechanic to evaluate the state of the car, then asymmetrical information can be eliminated. The objective information offered by certain organizations is rare because information is a public good. Information is valuable from the social point of view if it values more (for the consumer) than the cost of supplying it. Although the information, which is valuable from the social point of view can exist, it is possible to encounter cases when no firm supplies it in a profitable way because it can't obtain all the benefits.

d) Standards and certificates contain useful information regarding the quality of a product or of a good. While the standard is a scale which evaluates the quality of a product, the certificate is a communication, in the way that the given product reaches a certain standard. For example, industrial groups can set their own standards and can offer them to a firm or to a group of firms to certify the fact that their products rise up to the standard level specified. Oftentimes, standards are established to guarantee brand conformity. Governmental agencies can ask the producing firms to transmit information regarding their products, such as the energy use of an electronic device or the second effects of a certain medicine. Moreover, the government can establish, on the one hand, minimum standards of quality, thus obliging the service suppliers to acquire a license. On the other hand, the government can set fees to guarantee that the firms respect the standards or the regulations regarding obligations, asking the firms to allocate compensation to the consumers in case products don't correspond to the standards.

Conclusions

The aspects discussed here involve specific analyses and approaches according to the type of market and the system of regulations practiced at the level of economy in order to ensure a flux of information necessary between the actors who act on one market or another. At the same time, one must notice the means of asymmetrical distribution of information between the parts taken into consideration and the means of relative balance of the quality and quantity of information in different economical activities.

To give a recent example, I will refer to the analysis led by Marta Christina Suciu and her collaborators (2011), which focuses the repercussions of asymmetrical information on the real estate crisis in the USA. This asymmetrical distribution of information worked on behalf of the interests of the crediting banks, which used the information to increase their profits through market manipulation. The strategy used had a common element in the prevention of the cornering crediting and of the irrational investments on the lack of information of the people who borrowed at a higher interest than the normal one, weak information on the debtor's rights, offering credit on the acquired building or the creation of new financial products which amplified the lack of information of the public. Among the factors which contributed at the crisis of the real estate market in the USA, the authors I am mentioning also enumerate the "euphoria" of credits owed to the legislation which "didn't keep up with the methods of risk evaluation or of evaluating the clients' bonity, the profitability bonuses for peak management in banking institutions, the high risks undertaken by companies which led to unpaid profitability, lack of moral and professional integrity of some representatives of the business environment and the promotion of economical policies meant to stimulate the "aggressive" demand for credit (cf. Suciu si colab., 2011, p.187-188).

To sum up, I would like to underline once more that information counts in every moment, it is different from any other kind of merchandise, it is the most heterogeneous good existing in economy; the value of information consists in its novelty feature, it can be sold only once, after which case it loses its attribute of information and consequently its economical value. All these are reasons to regard information and its distribution from a vaster perspective, which should incorporate the production and the system of access to information, as well as the restrictions connected to the recovery of the invested expenses in the accumulation of information and its use in socio-economical relations.

Bibliography

Akerlof, George, 2001, Nobel Prize Lecture: Behavioral Macro-economics and macroeconomic Behavior, www.nobel.se

Lindbeck, Assar, 2008, The Sveriges Riksbank Prize In Economic Sciences in Memory of Alfred Nobel (1969-2008), The Nobel Fundation's Internetmuseum, www.nobel.se/economics.

Marin, Dumitru; Stancu, Stelian, 2007, Information Economy – Themes and Applications, Bucharest, The Academy of Social Studies Printing House.

Popescu, Nela, 2004, New Tendencies in Risk Evaluation in Commercial Affairs (PhD paper), Bucharest, The Academy of Social Studies.

Prunea, Petru, 2006, Asymmetrical Information and the Uncertainty on Capital Market, in Theoretical and Applied Economy, 1, p.85-88.

Robu, Vasile; Sandu, Raluca, 2007, The Problem of Performace Analysis – A Critical Approach in the Context of Information Theory and Corporative Governing, in Theoretical and Applied Economy, 8, p. 15-28.

Rogojan, Angela, 2005, Economical Language and Communication, Bucharest, The Academy of Social Studies Printing House.

Spence, Michael, 2002, Signaling in Retrospect and the Informational Structure of Market, in T. Frangmye (ed.), The Nobel Prizes 2001, Stockholm, Nobel Foundation.

Suciu, Marta Cristina; Piciorus, Luciana; Imbrisca, Cosmin Ionut, 2011, The Repercussions of Asymmetrical Information on the Real Estate Crisis in the USA, in in Theoretical and Applied Economy, 18, 1, 176-191.

Stiglitz, Joseph, 2002, Information and the Change in the Paradigm in Economics, in “The American Economic Review”, 92, 3, p. 460-501.

Simandan, Matei, 2008, Critical Perspectives in the Philosophy of the Economical Science (vol. II), Timisoara, Editura Mirton.

Simandan, Matei, 2008, Arguments Upon Three Specific Phenomena of Asymmetrical Information, in vol. Theoretical Developments in Contemporary