




The institutional dimension of market failure

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Abstract

Motivation: At the turn of the 19th and 20th centuries, institutionalism was presented by T. Veblen as an alternative to neoclassical economics. On the basis of neoclassical economics, in addition to the explanation how an effectively functioning market leads to maximization of welfare, we also find a market failure analysis. The main theme of the presented study is an attempt to synthesize these concepts, in particular to show how the institutional approach modifies the perception of the market failure.

Aim: The aim of the article is to analyze the market failure on the basis of institutional economics. In addition, an attempt was made to determine how institutional solutions can result in limiting certain types of market failure.

Results: In the light of the analysis carried out, the analysis of market failure based on Veblen's institutionalism is not justified. However, the relation between the New Institutional Economics and the neoclassical interpretation of market failure can be noticed, mainly, when it comes to explaining the reasons for the existence of markets and the methods used to counteract external effects.

Keywords: market failure; institutional economics; neoclassical economics

JEL: B25, B52; D40

1. Introduction

When the failure of a system or mechanism is discussed, both the aim, which is supposed to be achieved and the criteria for proper functioning should be determined. Otherwise, 'unreliability' means only disapproval of the existing state

of affairs. There has been a lot of controversy about the definition of the term 'market failure'. Often, it results from the intuitive usage of this term, without a deeper reference to the criteria. When the criteria are not fulfilled, it becomes reasonable to talk about the appearance of a certain type of irregularity. In contemporary trends of economic thought, the criteria of effectiveness were fully defined within neoclassical economics. Other schools, such as socialism (utopian and scientific), the German historical school and widely understood Keynesianism were far from accepting the results of the market economy. They often proposed radical institutional solutions, which were supposed to prevent various forms of injustice and exploitation and to increase the effectiveness of the price mechanism. Institutionalism was one of the most significant currents of the 20th century critique of neoclassical economics. Initially, its creator T. Veblen expressed his opposition to the neoclassical theory as well as the 20th century market economy — mainly American one. In the 1930s, R. Coase (1937) presented an analysis of transaction costs and proposed a new method of examining the institutions, which thanks to O.E. Williamson (1975) gained the title of New Institutional Economics (NIE). Within its framework, the idea of neoclassical economics was combined with the reflection on the impact of institutional solutions on the effectiveness of the market economy.

The aim of the presented study is to find an answer to the question to what extent institutional solutions combine with the neoclassical approach to market failure and how they can counteract it.

As a research hypothesis, it was assumed that the basic source of interpretational differences arising from the problem of the market failure is the lack of a clear distinction between market imperfections understood narrowly, as a resource allocation mechanism, and broadly as a system of socio-economic activity organization.

2. Literature review

There is a vast literature on the subject of market failure, which dates back to the classical political economy and the criticism of the 19th century. If, however, a systematized approach to market failure, which was defined on the basis of neoclassical economics, is used as the reference point, two articles by F. Bator (1957; 1958) should be mentioned: *The simple analytics of welfare maximization* and *The anatomy of market failure*. The former of the referenced articles contains a presentation of neoclassical efficiency criteria, for which market failure is most often defined. The latter one presents this failure. In addition to the Bator's publications mentioned above, there was an article of K.J. Arrow & G. Debreu (1954) preceding them, in which they presented the evidence of general equilibrium. The market failure resulting from the lack of perfect competition was noticed in the 19th century by A.A. Cournot (1838). In the 1930s, this topic was developed by E.H. Chamberlin (1933) and J.V. Robinson (1933). Externalities appeared in the context of A.C. Pigou (2005) divergences between the mar-

ginal social net product and the marginal private net product, and then they were analyzed in the works of Buchanan & Stubblebine (1962), Meade (1952) and Scitovsky (1954). On the other hand, public goods, understood as a manifestation of market failure, were presented by P.A. Samuelson (1954; 1955) in two articles. Their development in the form of club goods were presented by Buchanan, (1965). In the 1970s, G.A. Akerlof (1970) modified the way of thinking about market failure in the perspective of information asymmetry, which was creatively developed by B.C. Greenwald & J.E. Stiglitz (1986). The Polish monographs which contributed to the issue of uncertainty were: Garbicz & Staniak (2010) and Giza (2013). The works mentioned above do not complete the broad spectrum of literature devoted to market failure. However, they indicate the main ways of thinking about this issue.

To combine market failures with the legacy of institutional economics, the importance of R. Coase (1937; 1959; 1960) should be emphasized. In the first of the mentioned articles, he presented the idea of transaction costs, which is crucial for the New Institutional Economics. In the next two, he considered the possibility of solving external effects in a different way than proposed by A.C. Pigou in the 1920s. The question: were K.J. Arrow (1969) and O.E. Williamson (1971) interested whether transaction costs are one of the types of market failure?

3. Methods

The presented article is a theoretical study of market failure in historical approach. The adopted research perspective is characteristic to the so-called rational reconstructions, in which the basic point of reference are the standards of modern economic theory, in particular its neoclassical current. The research, as well as the obtained results, belong to the group of basic research.

4. Results

Although it is difficult to indicate a clearly defined catalogue of market failure, there is some consensus in this regard. In the microeconomic perspective, market failure is: unreliability of competition (the problem of monopolization) and economies of scale, externalities, public goods, asymmetry of information and incomplete markets related to them. Taking into account the macroeconomic perspective, market failure may include: unemployment, inflation or economic fluctuations¹. By widening the approach of positive economics to nor-

¹ The extension of the allocation efficiency criteria with other conditions than those formulated on the basis of neoclassical economics is required in order to include such phenomena as unemployment, inflation and economic fluctuations into the definition of market failure. Therefore, in the economic literature there is no consensus regarding the scope of phenomena that we can clearly define as market failure.

mative considerations, the division described above, can be supplemented with income inequalities and the social exclusion.

The contemporary view of market failure embedded in the tradition of neo-classical economics, which was defined by F. Bator (1958, p. 351) as ‘typically, at least in the allocation of the theory of the market-sustainability’ desirable ‘activities to estop ‘undesirable’ activities’. This means, by definition that, the market is treated as an allocation mechanism, the usage of which should lead to obtaining the optimal result within clearly defined criteria of effectiveness.

In addition, Pareto stated that when these criteria are fulfilled, the welfare is maximized. It results from the first fundamental theorem of the welfare economics, according to which every allocation obtained through the market is an optimal allocation. The market unreliability can therefore be associated with the inability to achieve welfare in the social dimension using the game of demand and supply under conditions of perfect competition.

F. Bator clearly stated that the model presented by him does not explain how the existing social and economic system functions. It only shows a set of strictly formulated assumptions, when they are fulfilled, an optimal solution, which was defined by Pareto, becomes possible to achieve. Bator also claimed that there are many factors in the real world that disrupt the achievement of the most desirable solution. They include: ‘imperfect information, inertia and resistance to change, the infiltration of costless lump-sum taxes, businessmen’s desire for a’ quiet ‘life, uncertainty and inconsistent expectation, the vagaries of aggregate demand, etc.’ (Bator, 1958, p. 352). The dichotomy between market failure considered at the theoretical model level and the empirical analysis of this phenomenon in relation to the real solutions of a given socio-economic system, was emphasized by A. Marciano & S.G. Madema (2015, p. 6), who claimed that: ‘It also reveals a crucial distinction between the failure of markets as a system of economic and social organization, and the failure of a single market to perform according to the dictates of some objective function’. The authors also draw attention to the fact that the interpretation of market failure depends to a large extent on the historical context².

Initially, the market was criticized mainly as a socio-economic system. In the 19th century, T.R. Malthus expressed his concern about the development prospects of humanity that result from the limited resources on the Earth. He also criticized the idea of stability of the economy based on J.B. Say’s law of market. K. Marx concentrated on the fundamental conflict between capital and labour and the social tensions that result from this conflict. J.M. Keynes attempted to explain the greatest economic disaster of the early 20th century, which was the Great Depression of 1929–1933.

² A. Marciano & S.G. Madema (2015) began the dispute on the market failure in the article *Market failure in context introduction* in the Collection of articles published in the paper *History of political economy* in 2015. The articles presented allow us to study the current state of knowledge on the issue with the historic perspective.

The market, at least partially, disappointed the expectations of those who perceived it as a universal mechanism that guarantees the achievement of welfare. Especially when it comes to distribution effects, as well as the development of its possibilities to overcome the economic underdevelopment of the Third World countries³. The criticism of the market, understood as a socio-economic system, has got a wider institutional dimension and direct reference to normative judgements.

When one searches for mutual relations between the contemporary view of market failure, initiated in the 1950s by F. Bator, and the institutional economics, it is necessary to emphasize the different perception of the market by economists who identify themselves with these traditions. T.B. Veblen (1900, p. 261) cut himself off from the legacy of the marginal revolution, especially the Marshall's economics, by creating the term 'neoclassical economics'. For the institutionalists, the market is an evolutionary mechanism. It is not a self-regulating mechanism of resource allocation, which is able to generate prices interpreted by rational individuals as parameters which allow to make rational decisions. The idea of evolution taken from biology excludes the physical approach advocated by the neoclassicals, according to which the market strives for balance⁴. Evolution is blind. It only allows you to select these solutions that prove to be the most sustainable in the area of social and economic life. Therefore, discussing the unreliability of the market, as a kind of dysfunction of the price mechanism, becomes irrelevant on the basis of Veblen's institutionalism.

A perfectly competitive market, according to neoclassical economics, is defined as an idealized structure with some desirable features. Market failure is a deviation from this ideal state. If, in neoclassical economics, the lack of perfect competition is considered to be a sign of market failure, then the following questions arise: Why do we make transactions in fully effective markets in the real world so rarely? What is the reason for this? When the mainstream economists searched for the answers, they analyzed the reasons for monopolizing the market. Especially these that led to the creation of natural monopolies. Their existence is conditioned by increasing returns to scale. This was noticed in the late 19th century by A. Marshall (2013, pp. 232–242), the participants of the disputes over the so-called Empty Economic Boxes and J. Viner (1932), who constructed and explained the shape of the long run average cost curve, which is used now to illustrate the issue of economies of scale. At the beginning of the 20th century, the discussion focused on the theoretical model and concerned the shape of the production function and costs that were the consequence of revenues relative to the scale of production. The results of the discussion

³ The contemporary controversy related to distribution theory returned to the academic dispute after T. Piketty's (2014) work was published. After II WW, G. Myrdal (1957) began the debate on the social underdevelopment connected with the criticism of neoclassical economics.

⁴ Veblen (1900, p. 242) defined the assumption about the market's striving for balance as meliorative trend.

did not explain the behavior of real markets, which subjected to the processes of strong monopolization as a consequence of the Second Industrial Revolution. They directed neoclassical efforts towards quantitative methods that allow researchers to precisely shape the socio-economic reality. One should agree with the thesis of D. Colander (2015, p. 255), according to which the development of quantitative analysis tools in the 1930s and 1940s, and in particular the usage of multivariate calculus had a significant impact on the way the market was interpreted.

Before World War II, the differences between the institutionalists and the advocates of neoclassical economics were not limited only to the ontological assumptions which regarded to the nature of the market. They also had an epistemological dimension. The representatives of neoclassical economics chose a research approach based on the deduction method, which gave the cohesion to the theory. On the other hand, the heirs of Veblen remained faithful to the induction method and empirical research. Neoclassical orthodoxy gradually began to gain popularity at universities that attracted mathematically talented theoreticians of economics. In turn, Institutionalism became more and more often perceived as a kind of economic heterodoxy. Not only economists, but also widely understood researchers of socio-economic reality referred to it.

The attempt to break this dichotomy took place in the context of the New Institutional Economics, also called theoretical institutionalism. Its creation is connected with the attempt to answer the fundamental question posed by R. Coase (1937, p. 388): why are there companies in the market economy — hierarchical structures? What justifies their existence? Coase, who answered these questions, introduced the category of transaction cost to the scientific discourse. With its help, it showed that the market operation involves certain costs, which may make it more cost-effective to allocate resources through a hierarchical structure — a company, than through a decentralized market mechanism.

New Institutional Economics and Veblen as well, analysed the institutions understood as rules of the game. However, in the field of the research method it followed the footsteps of neoclassical orthodoxy and assumed the rationality of the individual. In New Institutional Economics, the neoclassical model of rationality was supplemented with an additional constraint in the form of an institutional structure⁵. This structure may have various features that the individuals take into account in the decision-making process. Therefore, rational behaviour is always considered in a specific institutional context. It is characterized by a certain amount of relativism. One could say that whether we are rational

⁵ In the coursebooks for microeconomics, a formally defined structure of consumer preferences based on axioms of rational behavior. It allows generating an indifference curve on which the budget constraint is imposed and in this way the consumer's optimum is determined. The supporters of the New Institutional Economics suggest modifying this model with institutional restrictions.

or not, depends on our decisions interpreted within the framework of specific institutional conditions.

Therefore, can transaction costs be treated as one of the types of market failure? Both the co-founder of the general equilibrium model — K.J. Arrow, as well as the institutionalist O.E. Williamson attempted to answer this question. In the article *The organization of economic activity: issues pertinent to the choice of market versus non-market allocation*, K.J. Arrow (1969) proposed to widen the perspective in which market failure should be considered. He admitted that transaction costs, interpreted as one of the symptoms of market failure, are not absolute but relative. They can be interpreted as unreliability only when there is an alternative solution to allocate resources more efficiently than through the usage of a price mechanism. Arrow (1969, p. 12) stated it in the following way: ‘market failure is the particular case where transaction costs are so high that the existence of the market is no longer worthwhile’. Williamson (1971, p. 114) similarly interpreted transaction costs. He supported the view that transaction costs cannot always be interpreted as signs of market failure. They become them only when it is possible to reduce them by replacing the market transaction with a hierarchical structure.

It is obvious that both Arrow and Williamson perceived the necessity of going beyond the statically understood general equilibrium model. It allows us to ensure only the coherence of the theoretical explanation at the expense of its realism. The interpretation of market failure proposed by F. Bator and the other representatives of Institutional Economics highlights the dichotomy perceived by T. Mayer (1993) in his methodological study *Truth versus precision in economics*. Mayer set the highly formalized economics against the empirical and scientific approach by showing the benefits and limitations of these approaches.

The arguments mentioned above refer mainly to the unreliability of competition and especially to the methodological dimension of this dispute. When one analyzes the achievements of the New Institutional Economics, one significant change should be mentioned. The change that appeared in the way of perceiving external effects after taking into account R. Coase’s (1960) groundbreaking article *The problem of social cost*. However, before this article appeared, external effects had been analyzed in the light of the demands of the welfare economics formulated by A.C. Pigou in 1920. He indicated that the emergence of external effects caused a difference between a private net product and a social net product. The occurrence of this discrepancy is one of the manifestations of market failure. Pigou (2005, pp. 172–203) proposed a system of taxes and subsidies as a method of eliminating external effects. He therefore, noticed the necessity of adjusting market solutions through the state.

In 1952, J.E. Meade (1952, pp. 54–61) presented the essence of external effects on a simple example of an apple producer and owner of a bee apiary. These effects occur in the production process under conditions of perfect competition. Meade argued that enlarging the orchard area causes the growth of collected nectar by bees. Therefore, the beekeeper becomes the beneficiary of the increase

in production of apples without incurring costs related to the planting of fruit trees, on which bees collect nectar. In this case, there is a production factor that has not been paid. This is a direct impact. The example presented by Meade was used by T. Scitovsky (1954, p. 146) to analyze the controversial distinction between technological external economies and pecuniary external economies. The transmission channel of the latter is the price mechanism. On the other hand, Buchanan & Stubblebine (1962, p. 372), who considered the essence of external effects, recorded consumer utility functions in the following way: $U_A = U_A(X_1, X_2, \dots, X_m, Y_l)$. According to this record, the utility achieved by the individual (U_A) depends on the actions which results from its own decisions (X_1, X_2, \dots, X_m), as well as decisions taken by other individuals (Y_l), which limits the possibility of achieving paretooptimal allocation. The usability function presented by Buchanan & Stubblebine (1962) also allows us to notice the limitations which result from the extremely individualistic interpretation of social relations, which are present in the neoclassical orthodoxy. The maximization of usability by individual is not only due to its preferences. It is modified by the operation of other individuals, which was taken into account as (Y_l). The institutionalists are more likely to study the complex transaction structure, which allows understanding social relations more deeply.

R. Coase's view on external effects was not aimed at resolving the theoretical nuances raised by Buchanan and Stubblebine (1962), Meade (1952) and Scitovsky (1954). Coase (1959) was interested in the practical aspects of searching for legal and institutional solutions that would reduce the consequences of these effects. A practical problem related to the allocation of radio frequency waves became an inspiration to carry out the research. Contrary to popular belief, Coase challenged the thesis that the state should always prohibit individuals from generating external effects. He made an attempt to indicate the conditions after which these effects can be solved as part of market negotiations. The Chicago economists accepted his arguments after a memorable discussion at Aaron Director's house. G. Stigler (1960), who participated in the discussion, described it as one of the most interesting in his academic life. The result of the debate was the publication *The problem of social cost*. The theorem presented by Coase still evokes many interpretations. They are related to the conditions whose fulfillment opens the way to an effective solution of the external effect within the framework of market negotiations but not arbitrary state interference. Among these conditions there are postulates of zero transaction costs or the existence of perfect competition. Certainly, both the first and the second condition are difficult to fulfil in the real world. This was repeatedly emphasized by R. Coase.

5. Conclusion

The comments presented above do not apply to all types of market failure. However, they show that so far, the key category of transaction costs for the NIE has

not been fully included in the structure of the general equilibrium model. The analysis of market failure from the point of view of neoclassical economics is based on a set of unequivocally formulated postulates that enable to achieve a paretooptimal allocation. It is an idealized model, which, however, is a reference point in order to search for optimal solutions in the real world. Institutional economics adopts different assumptions in relation to neoclassical economics. They relate to both the aim of the analysis, the nature of the market and the research approach. Institutionalists are more interested in solving practical problems of economic life than neoclassicals. They examine the functioning of the market economy which is understood as a system rather than the mechanism of resource allocation. The solutions proposed by them allows us not only to better understand the nature of the market, but also to formulate recommendations for economic policy, the implementation of which will allow us to approach solutions that are compatible with the neoclassical efficiency criteria.

References

- Akerlof, G.A. (1970). The market for ‘lemons’: quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3). doi:10.2307/1879431.
- Arrow, K.J. (1969). The organization of economic activity: issues pertinent to the choice of market versus non-market allocation. In Joint Economic Committee (Ed.), *The analysis and evaluation of public expenditures: the PPB system*. Washington: G.P.O.
- Arrow, K.J., & Debreu, G. (1954). Existence of an equilibrium for a competitive economy. *Econometrica*, 22(3). doi:10.2307/1907353.
- Bator, F.M. (1957). The simple analytics of welfare maximization. *The American Economic Review*, 47(1).
- Bator, F.M. (1958). The anatomy of market failure. *The Quarterly Journal of Economics*, 72(3). doi:10.2307/1882231.
- Buchanan, J.M. (1965). An economic theory of clubs. *Economica*, 32(125). doi:10.2307/2552442.
- Buchanan, J.M., & Stubblebine, W.C. (1962). Externality. *Economica*, 29(116). doi:10.2307/2551386.
- Chamberlin, E.H. (1933). *Theory of monopolistic competition*. Cambridge: Harvard University Press.
- Coase, R.H. (1937). The nature of the firm. *Economica*, 4(16). doi:10.2307/2626876.
- Coase, R.H. (1959). The federal communications commission. *Journal of Law and Economics*, 2. doi:10.1086/466549.
- Coase, R.H. (1960). The problem of social cost. *Journal of Law and Economics*, 3. doi:10.1086/466560.
- Colander, D. (2015). Framing the economic policy debate. *History of Political Economy*, 47. doi:10.1215/00182702-3130535.



- Cournot, A.A. (1838). *Recherches sur les principes mathématiques de la théorie des richesses*. Paris: Hachette.
- Garbicz, M., & Staniek, Z. (2010). *Mikroekonomia. Problemy zawodności rynku*. Warszawa: Wyższa Szkoła Menedżerska w Warszawie.
- Giza, W. (2013). *Zawodność rynku. Powstanie i rozwój idei*. Kraków: Uniwersytet Ekonomiczny w Krakowie.
- Greenwald, B.C., & Stiglitz, J.E. (1986). Externalities in economies with imperfect information and incomplete markets. *Quarterly Journal of Economics*, 101(2). doi:10.2307/1891114.
- Marciano, A., & Madema, S.G. (2015). Market failure in context: introduction. *History of Political Economy*, 47. doi:10.1215/00182702-3130415.
- Marshall, A. (2013). *Principle of economics*. Basingstoke: Palgrave Macmillan. doi:10.1057/9781137375261.
- Mayer, T. (1993). *Truth versus precision in economics*. Aldershot: Edward Elgar.
- Meade, J.E. (1952). External economies and diseconomies in a competitive situation. *The Economic Journal*, 62(245). doi:10.2307/2227173.
- Myrdal, G. (1957). *Economic theory and underdeveloped regions*. London: Gerald Duckworth.
- Pigou, A.C. (2005). *The economics of welfare*. New York: Cosimo Classics.
- Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge–London: Harvard University Press. doi:10.4159/9780674369542.
- Robinson, J.V. (1933). *The economics of imperfect competition*. London: Macmillan.
- Samuelson, P.A. (1954). The pure theory of public expenditure. *The Review of Economic and Statistics*, 36(4). doi:10.2307/1925895.
- Samuelson, P.A. (1955). Diagrammatic exposition of a theory of public expenditure. *The Review of Economic and Statistics*, 37(4). doi:10.2307/1925849.
- Scitovsky, T. (1954). Two concepts of external economies. *The Journal of Political Economy*, 62(2). doi:10.1086/257498.
- Stigler, G.J. (1994). *Production and distribution theories*. New Brunswick: Macmillan.
- Veblen, T.B. (1900). Preconceptions of economic science. *The Quarterly Journal of Economics*, 14(2). doi:10.2307/1883770.
- Viner, J. (1932). Cost Curves and Supply Curves. *Zeitschrift für Nationalökonomie*, 3(1). doi:10.1007/bf01316299.
- Williamson, O.E. (1971). The vertical integration of production: market failure considerations. *The American Economic Review*, 61 (2).
- Williamson, O.E. (1975). *Market and hierarchies, analysis and antitrust implication: a study in the economics of internal organization*. New York: Free Press.



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