

Kurek R. (2014). The efficiency of public insurance supervision vs. Pareto efficiency. Copernican Journal of Finance & Accounting, 3(1), 109–119. <http://dx.doi.org/10.12775/CJFA.2014.009>

ROBERT KUREK*

Wrocław University of Economics

THE EFFICIENCY OF PUBLIC INSURANCE SUPERVISION VS. PARETO EFFICIENCY

Keywords: Pareto optimality, supervision, insurance.

J E L Classification: G22, G28, D70.

Abstract: The objective of the paper is to research whether Pareto optimality can determine the efficiency of activities carried out by public supervision authorities by analyzing literature references and applying the method of verbal description. Having made certain assumptions, Pareto criterion can determine the model reference point in which supervision authorities' decisions are aimed at improving the situation of consumers without resulting in the simultaneous deterioration of insurance institutions situation. It also ensures proper functioning of the entire market. However, the public aspect of the problem determines the fact that supervision authorities should not search for the model Pareto optimum, but rather focus their activities on obtaining one of many possible optimums responsible for different share of particular entities in the achieved results.

Translated by Hanna Fajak

EFEKTYWNOŚĆ DZIAŁAŃ PAŃSTWOWEGO NADZORU UBEZPIECZENIOWEGO A OPTIMUM PARETO

Słowa kluczowe: optimum Pareto, nadzór, ubezpieczenia.

Date of submission: February 27, 2014; date of acceptance: March 24, 2014.

* Contact information: rrkurek@poczta.onet.pl, Wrocław University of Economics, Nowowiejska 3, 58-500 Jelenia Góra, Poland, phone: 757 538 263.

Klasyfikacja J E L: G22, G28, D70.

Abstrakt: Cel artykułu to zbadanie za pomocą metody analizy piśmiennictwa i metody opisu słownego, czy paretowskie optimum może być wyznacznikiem efektywności działań prowadzonych przez organy państwowego nadzoru ubezpieczeniowego. Przy dokonaniu pewnych założeń kryterium Pareto może wyznaczać modelowy punkt odniesienia, w którym decyzje nadzoru służą poprawie sytuacji konsumentów bez jednoczesnego pogarszania sytuacji zakładów ubezpieczeń, przy jednoczesnym zagwarantowaniu właściwego funkcjonowania rynku, jako całości. Uwzględnienie aspektu społecznego oznacza jednak, że organy nadzoru nie powinny poszukiwać modelowego optimum Pareto, a aktywność organów nadzoru powinna skupić się na osiągnięciu jednego z wielu możliwych optimumów, oznaczających różny udział poszczególnych podmiotów w osiągniętych efektach.

■■■ INTRODUCTION

Efficiency can be referred to any domain of deliberate human activity. In case of public supervision over insurance institutions¹ it is the legal regulations which determine the framework of supervision procedures and identify the possibilities for its effective and efficient operations. This, however, does not contradict searching for an optimal situation in Pareto sense. According to it the activities performed by supervision authorities allow the situation improvement with reference to some entities without deteriorating it in case of others.

The thesis stating that Pareto efficiency can determine operations carried out by public insurance supervision authorities underlies this particular study and determines its goal. It was verified by means of analyzing literature references, legal regulations and applying the method of verbal description.

THE RESEARCH METHODOLOGY AND THE COURSE OF THE RESEARCH PROCESS

The research is of descriptive and explanatory nature. Owing to its subjective character the entire discussion referring to Pareto optimality and efficiency of public insurance supervision will always remain within the research area at the level of normative economy. In the course of the research process the author collected, analyzed and interpreted information which, supported by the

¹ The discussed problems are of universal nature and can be referred to any type of public supervision (over banking market, financial market), however, due to the author's knowledge of insurance market the study refers to this particular market type.

author's comments, were aimed at extending the knowledge and understanding the problems covered.

THE SPECIFIC RECOGNITION OF EFFICIENCY UNDERLYING THE OPERATIONS PERFORMED BY PUBLIC INSURANCE SUPERVISION AUTHORITIES

Public supervision is the function "aimed at compromising, in a supervisory manner, both private and public activities with the requirements of substantive law, following the interests of public order and public benefit" (Staryszak 1931, 93). In its essence, almost every public supervision restricts certain subjective rights of the supervised entities (Stankiewicz 2006, 204). A similar situation is true in case of supervising insurance institutions performance. Their subjective rights are limited, however in return, a broader group of beneficiaries is offered the possibility to keep them. It takes the form of ensuring safe operations performed by insurance institutions manifested in protecting interests of the insured and the protection of insurance market.

An efficient action is referred to as "...an effective, swift, important, actual manifestation of human activity" (Kopaliński 1985, 111). If it is transferred into economic reality, it defines efficiency as the concept referring to "... the assessment of performance rationality in terms of solving the problem of limited resources allocation between their alternative usage types" (Szewc-Rogalska, 1-212).

The assessment of supervision institutions efficiency is focused on the ability of adequate current and future evaluation of the supervised entities operations, based on the available information and making proper (correct) decisions on this basis. The decisions made by supervision authorities have impact on the insurance market participants. Their efficiency should be assessed in the context of consistency between the anticipated results and the means at their disposal for the implementation of the defined goals. It means that the discussion regarding supervision efficiency should be referred to in praxeological terms, i.e. in terms of individual search for the best possible solution. The praxeological nature of attributes underlying both effective and efficient functioning should be considered, i.e. its beneficial, effective and economic nature (Dębski 2006, 270-271), rather than in terms of value maximization.

While discussing the efficiency of public supervision it is necessary to separate strategic efficiency – the selection of correct goals and operational efficiency – proper operations and a "well done job" (Szewc-Rogalska 2004). Stra-

tegic efficiency is disregarded in case of public supervision, since the set goals have already been imposed. It is the operational efficiency which is of prior significance. It is referred to as the level of implementing goals to be supervised. In the second case it is also possible that public institutions promote efficiency by adopting business methods (Grandy 2009, 1115–1123).

The crucial component of assessing efficiency is the problem of its measurement. The applied measures, most often, present the ratio of the obtained effects against the outlays incurred, or an anticipated relation. In other words they express the ratio of expected effects against the planned outlays. The majority of measures are based on return rate. However, in case of public supervision authorities this criterion does not present much significance². The level of tasks implementation is of crucial significance. In case of public insurance supervision it is manifested in adequate care offered to consumers of insurance services and proper development of the supervised market. Efficiency assessment, in this case, is performed from public perspective (financial system stability, customer protection) where mainly qualitative measures can be applied. Quantitative measures are of supplementary nature though.

THE ASSUMPTIONS FOR PARETO EFFICIENCY APPLICATION IN THE OPERATIONS PERFORMED BY SUPERVISION AUTHORITIES

The concept of resources efficient allocation, in terms of Pareto efficiency, is based on evaluative judgements. Each entity best evaluates its own wealth, whereas public wealth is determined based on the wealth of individual entities (Blaug 1994, 593). The choice of one out of many existing Pareto optimality states is possible only following the usefulness category analyzed in an individual scale and by taking advantage of information available at a given point in time (Cordato 2004, 3–36). Pareto efficiency is mainly based on individual preferences and does not consider public interest. Therefore the thesis adopted in the study is fundamentally wrong. Supervision authorities take care of public interest and thus, theoretically, should not apply the Pareto criterion in the course of their operations optimization. The efficiency assessment can, however, be performed with reference to the entire economy. In accordance with Pare-

² Public institutions (supervision authorities) are not free from the obligation to analyse costs of their functioning and expenditure rationalization. It is especially visible in the areas covered by effective mechanisms controlling such institutions functioning.

to equilibrium theory the efficiency state³ is achieved in economy when certain goods change their position. It means that an increasing satisfaction of some of them does not, simultaneously, reduce the satisfaction of the other (Pareto 1897; Landreth, Colander 1998) which, through its impact scale, is also translated into public context.

The decisions and operations performed by supervision authorities, subject to efficiency and effectiveness assessment, have impact on three crucial areas:

- insurance institutions – supervision authorities perform supervision over entities which determine the course of financial events occurring in economy and, hence, decide about the method for allocating goods in economy;
- insurance market – the effectively functioning supervision authorities stimulate competition and enhance operational efficiency of the supervised entities;
- clients – supervision authorities, even though do not have the competencies to exert direct impact on the consumers of insurance services by influencing the first two components have indirect impact on consumers and their choices.

Protecting the interests of insurance companies clients, as well as taking due care of the insurance market stable development, define the boundaries of operations performed by insurance authorities. Their tasks implementation, within the three possible impact areas is translated into undertaking efforts to maintain public equilibrium. Therefore, these areas indicate the possibility for taking advantage of Pareto rule. This, however, requires introducing certain assumptions and taking the resulting limitations into consideration.

Restricting the equilibrium theory to economic efficiency, understood in Pareto terms, requires meeting particular conditions. They are possible only in the circumstances of perfect competition: efficiency in exchange, i.e. a transaction (action) which improves the situation of both parties involved, is not possible, or technical efficiency, i.e. perfect allocation of production factors and manufacturing goods meeting individual needs (Stiglitz 2004, 86). The following conditions refer to the absence of external effects at the market of externalities and assuming that all markets present total equilibrium and perfect competitiveness, transaction costs are negligible, and market participants have per-

³ In his equilibrium concept Pareto himself did not use the word “efficiency”. The term “Pareto optimality”, used nowadays interchangeably with the phrase “Pareto efficiency”, was used in literature for the first time in 1950 (Kozuń-Cieslak 2013, 172).

fect information (Greenwald, Stiglitz 1986, 229–264). Praxeological approach to efficiency, which applies to the operations of supervision authorities, from the perspectives of its properties, does reflect economic efficiency. However, in case of the operations performed by supervision authorities Pareto optimality has to be limited to efficiency in exchange only. Therefore it refers to analyzing actions consisting in the division of goods between consumers and the allocation of “production factors” between insurance institutions.

Making decisions and performing operations results in achieving the state of equilibrium in Pareto sense also following another limitation, i.e. the assumption of the absence of transactional costs. An attempt to transfer Pareto optimality to the problems underlying the efficiency of supervision authorities operations does not cover certain problems. It does not reflect the effect of regulations, referring to insurance institutions functioning and insurance market, on economic efficiency. The law determines the system of existing powers granted to supervision authorities. It also generates the related transactional costs, which occur whenever there is an interaction between parties (supervision authorities – insurance institutions). Such transactional costs have negative influence on the efficiency of performed operations or even prevent achieving the state of equilibrium. Theoretically, if legal regulations did not exist transactional costs would not occur (Cooter, Ulen 2000, 90).

Pareto efficiency assumes that effective decisions are made in the circumstances when any further improvement of the situation turns out impossible without deteriorating the situation presented by any of the entities involved. In practical terms, this principle is supposed to protect private property and classifies as ineffective (suboptimal) all possible operations. As a result any involved party is forced to make concessions. Obviously, such situation does not promote equality between the entities affected by insurance supervision, however, it does not rule out the respect for individual independence. At the same time, improving the situation of insurance institutions clients, or the situation at the insurance market, is frequently associated with restricting the subjective rights of insurance institutions. Therefore, it happens at their expense, which is against Pareto rule. An attempt to apply Pareto efficiency to the sphere of insurance supervision assumes the protection of privileged entities and does not mean promoting fair solutions.

PARETO OPTIMALITY VS. THE EFFICIENCY OF SUPERVISION INSTITUTIONS OPERATIONS

Pareto efficiency is the minimal notion of efficiency and does not necessarily result in the socially optimal distribution of resources: it makes no statement about equality, or the overall social welfare (Barr 2012, 46). Pareto optimality, in its essence, does not define any type of public optimum. However, what is economically effective is also effective in public terms. Following such approach there is an unlimited number of public optimums. It means that the processes of resources allocation are related to the issues of efficiency. If translated to supervision authorities operations they require activities adjusted to individual circumstances and situations presented by particular insurance institutions. In such perspective the operations performed by supervision authorities are convergent with the attempts at achieving equilibrium optimality not only in economic terms. A supervision authority performs supervision and in the situation of detecting abnormalities (a threat to public equilibrium point) undertakes actions. If accompanied by the application of available means and tools, it aims at encouraging the supervised entities to comply by regulations in force. They can be of general nature and cover all entities in the sector (e.g. verification of solvency standards). They can also present an individual dimension and take the form legally binding decisions (e.g. which require meeting the permissible risk standards).

The means available to supervision authorities facilitate the comprehensive effect on the supervised entities. However, following their rigorous approach they frequently provide for the imposition of “additional duties resulting in an extensive increase of operating costs and thus can also have negative impact on the entire market efficiency” (Posner 1977, 335). This persists in contradiction to the equilibrium theory. In practice it often happens that the decisions made by supervisory authorities improve the situation of some entities (clients) at the expense of the other (insurance institutions). Such activities are reasonable when the benefits experienced by the first group are more extensive than the “loss” incurred by insurance institutions. Moreover, there has to be at least a theoretical possibility for such loss compensation⁴ regarded as beneficial

⁴ It does not refer to the compensation principle in terms of Kaldor-Hicks efficiency criterion. According to it compensation is to occur “in a favourable manner” for the party suffering a loss (Kaldor 1939, 549–552; Hicks 1939, 696–712).

for the entire market. Then the surplus of benefits over compensation costs improves the situation of all entities. It determines Pareto efficiency and also represents the measure of social wealth growth resulting from this solution implementation. Such situation, obviously, in its model presentation should determine the operations performed by supervision authorities. However, the protection of customer interests and insurance market, without taking into account the particular interests of insurance institutions would be contradictory to the function of safeguarding legal regulations. It would also result in higher transactional costs, thereby becoming more and more distant from the equilibrium point.

Therefore, theoretically Pareto efficiency seems to be a good method for determining whether the conducted activities can be referred to as effective. In practice, however, undertaking decisions and operations of public effect, in the course of which at least one entity incurs losses, is almost impossible. As it has already been mentioned, supervision authorities' operations can always be accompanied by actions restricting both independence and freedom of insurance institutions activities. The willingness to find Pareto optimality is thus dependent on divergent interests presented by the parties involved. While trying to meet the interests of insurance institutions and desiring to achieve the equilibrium point, supervision institutions can try to meet their tasks. It can be accomplished by means of making such decisions and seeking solutions which will not restrict the rights of insurance institutions. It is possible if repressive interventions performed by supervision authorities are minimized. Moreover, preventive measures, which consist in providing support (advice, consultancy, contacts in order to develop common standpoints), coordinating common activities and mitigating conflicts, should be intensified. Such attitude constitutes the softest supervisory measure. By means of transactional costs reduction it allows for the simultaneous achievement of one of the possible – in a given situation – Pareto optimums.

Pareto optimality can serve as efficiency determinant for the operations performed by public insurance supervision authorities. However, these activities cannot be limited to the model type of Pareto optimality, with efficiency understood as an ongoing search for one of many optimums. It means different participation of particular entities in the achieved results, manifested by optimal functioning of economy and an attempt for public equilibrium accomplishment.

■■■ CONCLUSIONS

The problems of supervisions authorities' operations efficiency should be presented in praxeological terms. They should come down to an individual investigation of best possible solutions rather than focus on value maximization in classical terms. The problem of profit, as the measure of efficiency, is also insignificant. It, however, dominates the level criterion of tasks implementation. Additionally, the discussion referring to public supervision efficiency disregards the strategic efficiency by assigning significance to operational efficiency only.

Supervision authorities exert impact on the allocation of resources by insurance institutions through influencing their competitiveness and efficiency. Indirectly they also influence correct choices made by consumers. Due to the fact that they have impact on all insurance market components, Pareto optimality can be the subject of ongoing discussions. However, if certain assumptions are considered, e.g. referring to the possibilities for protecting interests of privileged entities or the absence of externalities and transactional costs, they limit the focus to efficiency in exchange, in the conditions of full information available, or to analyzing efficiency mainly from the public perspective.

Pareto efficiency, in general terms, refers to short-term analyses. They are conducted from a static perspective and represent a purely theoretical model created to explain the rule underlying making choices in the situation isolated from its environment. The operations performed by supervised entities are dynamic rather than of heterogeneous nature. The insurance market is strictly connected with other economic components. Supervision authorities, on the other hand, continue transforming their structures and employ personnel presenting diverse qualities. Insurance institutions themselves keep offering new services which result from the occurring new needs. In such conditions the supervision authorities, aspiring to achieve an optimal situation in Pareto sense, will probably never accomplish such objective. Thus, by assumption, all operations performed by supervision institutions are not covered by the Pareto efficiency criterion. However, since both decisions and operations are ineffective in Pareto sense, it means that searching for a state in which the improvement of some participants' situation, without deteriorating that of the others, is possible. From the perspective of supervision authorities it is by all means desirable. Pareto optimality represents an indispensable condition. It is, however, not always sufficient for wealth maximization. Therefore the discussed rule can de-

termine the efficiency of supervisory operations, referring to insurance market and its components, only to a limited extent. Investigating best individual solutions, making rational choices related to the application of available means, the selection of best possible operations in terms of the defined goal and conditions restricting it, allow identifying the efficiency of supervisory operations with the maximization of public wealth. It also imposes the achievement of preferred values and goals to the utmost.

Pareto efficiency criterion can become the reference point for an overall assessment of supervisory operations' efficiency. However, it is feasible only in its model perspective, where the occurrence of numerous equilibrium points is possible. Pareto area or surface determines these points where the supervision decisions aim at the improvement of only one group of entities (clients) without the simultaneous deterioration of other entities (insurance institutions) situation. They also guarantee proper functioning of the entire market. Considering public aspects, in the operations performed by supervision authorities, results in the identification of different positions of insurance institutions and their clients. The operations of supervision authorities focus, however, on achieving one of many possible optimums referring to different participation of particular entities in the results achieved.

■■■ REFERENCES

- Barr N. (2012), *The relevance of efficiency to different theories of society, Economics of the Welfare State*, Oxford University Press.
- Blaug M. (1994), *Teoria ekonomii: ujęcie retrospektywne*, PWN, Warszawa.
- Cooter R., Ulen T. (2000), *Law and Economics*, Addison Wesley Longman, 3rd edition.
- Cordato R. (2004), *Toward an Austrian theory of environmental economics*, *Quarterly Journal of Austrian Economics*, Spring. <http://dx.doi.org/10.1007/s12113-004-1031-9>.
- Dębski D. (2006), *Ekonomika i organizacja przedsiębiorstw cz.2, WSPiP*, Warszawa.
- Grandy C. (2009). The "efficient" public administrator: Pareto and a well-rounded approach to public administration. *Public Administration Review*, vol. 69, issue 6. <http://dx.doi.org/10.1111/j.1540-6210.2009.02069.x>.
- Greenwald B., Stiglitz J.E. (1986), Externalities in economies with imperfect information and incomplete markets, *Quarterly Journal of Economics* 101 (2), Oxford. <http://dx.doi.org/10.2307/1891114>.
- Hicks J. (1939). *The Foundations of Welfare Economics*. *The Economic Journal*, vol. 49, no. 196. <http://dx.doi.org/10.2307/2225023>.

- Kaldor N. (1939), Welfare Propositions in Economics and Interpersonal Comparisons of Utility. *The Economic Journal*, vol. 49, no. 195. <http://dx.doi.org/10.2307/2224835>.
- Kopaliński W. (1985), *Słownik wyrazów obcych*, Wiedza Powszechna, Warszawa.
- Kozuń-Cieślak G. (2013), Efektywność – ewolucja koncepcji w retrospekcji teorii ekonomii, SiPKZiF, ZN 128, OW SGH, Warszawa.
- Landreth H., Colander D.C. (1998), *Historia myśli ekonomicznej*, PWN, Warszawa.
- Pareto V. (1897), *Cours d'economie politique profese r l'Univers, ite de Lausanne*, Lausanne, F. Rouge; Paris, Pichon.
- Posner R.A. (1977), *Economic Analysis of Law*, Boston.
- Stankiewicz R. (2006), Nadzór administracyjnoprawny jako forma relacji określająca oddziaływanie państwa na procesy koncentracji przedsiębiorców, *Studia Iuridica XLV/2006*, Wyd. UW, Warszawa.
- Staryszak J. (1931), *Prawo nadzoru nad administracją samorządową w Polsce*, Warszawa.
- Stiglitz J.E. (2004), *Ekonomia sektora publicznego*, WN PWN, Warszawa.
- Szewc-Rogalska A. (2004), *Efektywność restrukturyzacji własnościowej przedsiębiorstw w Polsce – ujęcie sektorowe*, Wyd. UR, Rzeszów.

