Is valuation of property a real science?

Je oceňování majetku skutečně věda?

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Abstract: The evaluation of property is one of the basic human professions that have accompanied the human race ever since money was first used. At the time of the formation of modern science, this discipline was not included among the economic sciences. The stipulation of the value of property was based not only on theoretical knowledge of the economics, knowledge of goods, technology, agriculture and law, but also practical skills, knowledge of markets and the art of correctly assessing the requirements of customers. This situation continued until the end of the last millennium, when the evaluation of property stood apart from official science and was presented as an activity that links science and art and for this reason it was not possible to include it among the scientific disciplines. There is given analysis of value and valuation of property. On the base of philosophical approach to value and process of valuation, it can be stated that Valuation is a science in terms which in modern science have meaning. This would enable surveyors to participate also in the promotion of their profession on the academic floor and thus have more influence on the general opinion of value and its influence on contemporary society.

Key words: valuation, science, price, value

Abstrakt: Oceňování majetku patří k jedné ze základních lidských profesí, která lidstvo doprovází od počátku užívání peněz. V době formování moderní vědy, nebyla tato disciplina mezi ekonomické vědy zahrnuta. Stanovení ceny majetku bylo založeno nejen na teoretických znalostech ekonomie, zbožíznalství, techniky, zemědělství, práva, ale i na praktických dovednostech, znalosti trhů a umění správného odhadu potřeb zákazníků. Tato situace pokračovala až do konce minulého tisíciletí, kdy oceňování majetku stálo mimo oficiální vědu a bylo prezentováno jako činnost, která spojuje vědu a umění, a proto nebyla mezi vědecké discipliny začleněna. Článek se zabývá pojmem hodnoty a procesem oceňování majetku. Filozofický přístup k hodnotě a k procesu oceňování umožní formulovat tvrzení, že Oceňování je věda ve smyslu moderního chápání vědy. Toto tvrzení umožní znalcům v oboru oceňování zúčastnit se na prosazování jejich profese na akademické půdě a tím posílit vliv na obecné mínění o ceně a jejím působení na současnou společnost.

Klíčová slova: oceňování, věda, cena, hodnota

The evaluation of property is one of the basic human professions that have accompanied the human race ever since money was first used. At the time of the formation of modern science, this discipline was not included among the economic sciences. There were many original reasons for this situation. The most fundamental of these lay clearly in the fact that the stipulation of the value of property was based not only on theoretical knowledge of the economics, knowledge of goods, technology, agriculture and law, but also practical skills, knowledge of markets and the art of correctly assessing the requirements of customers. This situation continued practically until the end of the last millennium, when the evaluation of property stood apart from official science and was presented as an activity that links science and art and for this reason, it was not possible to include it among the scientific disciplines (Gilbertson 2002; Harvey, Willis 1997; Gilbertson, Preston 2004).

With regard to the social status of the experts who handle the evaluation of property, this situation was considered acceptable, reflecting the state of this field. But the world is constantly changing, and science with it. Modern science is the fruit of long development of human activity and human thought. In this development, it has undergone a series of stages in which gradual changes occurred in the concept of the targets, methods and standards of scientific knowledge, including changes in the concept of science itself. The present concept of science can no longer be characterised by the simplified definitions given in encyclopaedic dictionaries, which emphasise

the difference between reason and intuition. These two sides of one and the same thing were artificially separated with the onset of humanism and the origin of mechanical descriptive sciences.

RESULTS

Science expands the knowledge of man. Knowledge is not understood in the sense of the absolute knowledge of the traditional philosophical ontology, but as the credible (valid) knowledge. This provides information about the surrounding world (natural sciences, technical sciences) and about man (social sciences). It finds implementation in applied science, technology and the sphere of activities evoked by man (known as second nature), including cognitive activities. Science represents creative activity. Controversial standpoints consider science as purely technical manipulative processes on the basis of pre-set patterns of human behaviour, which means that they do not reflect the fact that before they were put into practice they had to be discovered. Science is a living evolutionary process in which new findings are constantly being discovered and new theories arising which fundamentally change not only opinions of scientific activity, but also of the nature and structure of the world.

Discovery, creativity as the basis of science and art was analysed in his work by Paul Feyerabend (1980). Many fundamental scientific findings originated thanks to the daring ideas of individual scientists and not through the sequential use of some method. This is something science has in common with art. The scientist does not need only specialist and practical knowledge, but also creative thought. Is not this precisely the subtext of many reports dealing with the setting of the value of property?

Science is defined as a systematic, critical and methodological striving for true and general knowledge in a certain restricted area of reality. It grows out of human practice and the decisive force of the development of science has always been human activity and its needs. It also develops, however, from its internal sources through the logical development of its theorems, laws, hypotheses and theories, which enables it to outstrip practice and provide the projects of the future.

The basis of scientific research is the stipulation of a hypothesis – a theory that is verified by repeatable experiment. The scientific method is the aggregate of observations, hypotheses, forecasts, the acquisition of data, its verification, (in evaluation the determining of the value), and the use of the results achieved. According to B. Russell (1993): "If we reach some scientific law, then we have to deal with three main stages; the first lies in the observation of significant facts, the second in the formulation of a hypothesis that, if it is true, would explain these facts, and the third consists of the deduction of the consequences of this hypothesis, which it would be possible to test by observation. If the consequences are verified, the hypothesis is provisionally acknowledged to be true, even though later it will probably need modification thanks to the discoveries of further facts." The basis for a hypothesis is creativity, the creativity of the scientist and the aesthete (Feyerabend 1970). Creativity is the psychic disposition for the new and original elaboration of a problem. The basis is creative thinking and imagination, the ability to find not only a correct solution, but also an original one. Creativity can be implemented not only in science, art and technology, but also in everyday life.

Scientific method is defined as a systematic procedure that leads to the target in the given sphere. If we wish to devote closer attention to the methods of a certain scientific field, we will come up against the expression methodology, the subject of which is the study of methods or procedures commonly used in the scientific field concerned. Every science has its own particular method according to its orientation. Methodology differs from epistemology, which is a field of learning where the subject is science as such. The latter studies the principles, general hypotheses and conclusions of various sciences and evaluates their significance and objective import. The focus of its interest should be the growth of scientific knowledge. These philosophical problems were dealt with by Popper (1959) and Kuhn (1970). Searle (1994) writes: "The word 'science' suggests scientists in white coats shaking test tubes and staring at instruments. For many people, this expression is even linked with the mysterious infallibility. In opposition to these ideas, I would like to outline a different picture. In all intellectual disciplines, we are striving for knowledge and cognition. In other words, there exists nothing but knowledge and cognition, whether it concerns mathematics, physics, philosophy or the investigation of literature or history. Some disciplines are nevertheless more systematic than others and it is perhaps correct to leave the expression 'science' just for these."

Sciences differ among themselves in the subject of their research and in the method used. We can divide them into two large groups. These are the real sciences, which include the natural sciences (physics, chemistry, astronomy, biology), and the cultural or social sciences, including the intellectual sciences (e.g. historical, linguistic and technical sciences and sciences concerning art) and social and

economic sciences. The second group consists of the formal sciences, such as formal logic and mathematics (Hladík 1996). Sometimes it is not possible to determine precisely to which category a field of interest belongs. Microeconomics, for instance, can be taken as a social science or a formal-logic science (Macáková et al. 2003).

There is no doubt that mathematics is a science. It is, in fact, among the oldest sciences. In spite of this, there are opinions both for and against it. Those who see mathematicians as scientists consider mathematical proofs as the equivalents of experiments and consider experiments not to be imperative. Others do not consider mathematicians to be scientists just because they do not require experimental tests for their theories and hypotheses. We need mathematics, however, in almost all sciences not only for the statistical processing of results, but also for various computer programmes, the evaluation of experiments and, last but not least, for expressing the costs of scientific research and also in the evaluation of property.

From the above summary, it emerges unequivocally that the subject of the valuation of property can be included in modern science. It is a social science, an applied economics science, in the same way as business finance, accountancy, logistics, marketing, etc. The aim of this applied economics science, valuation, is to determine value. In valuation, use is made of a basic formula of the type:

Price = the monetary expression of the value of a thing (1)

On the right-hand side of the equation (1), there are 3 concepts: money, thing and value. There is no need to describe in greater detail what money is, and the same applies to the concept of a thing. This is defined by a legal norm and includes everything from real estate through machinery to intangible assets. Most controversial is the concept of value. In terms of philosophy, values can be characterised as epistemological or genetic problems. Lewis (1950) characterises values as attributes that cannot occur outside a certain substance. They can be realised or considered only as the characteristics of something. Value is the relationship of a specified object, human behaviour or action, or its consequences, to the wishes or will of an individual (i.e. subjective value), or to the content of an objective and recognised norm (i.e. objective value). The source or originator of a value is what is traditionally called "value judgement". Its opposite is "existential judgement" (Feyerabend 1984). According to the starting-points of value judgement of certain objects, activities of people, the consequences of these activities, etc. various types of values are differentiated. The classification of values is carried out basically according to the following systems:

– Epistemic values (perceptive, cognitive)
– Ethical values (moral in the widest sense of the word)
– Aesthetic values
– Technological or technical-economic values
– Health values
– Ecological values linked with the environment.

Each of the above systems should be defined by the sphere of validity, securing of consistency and the definition of the requirements for formulation. As is evident from the above-mentioned overview of the basic systems, it is possible to enter fundamentally differing values in equation (1). Their commensurability translated into monetary units outside the system of economic values is highly controversial, for example the present problem of the evaluation of nature.

If the interpretation of equation (1) is restricted merely to economic values, which means basically to exchange value and use value, then its left-hand side can be stipulated by the known and commonly used methods (Red Book, etc.). This means a "special price", which is defined as the market value, use value, investment value, insurance value, going-concern value, etc. Here it is necessary to emphasise the importance in the formulation of the basic definitions used in the evaluation of property. The significance of this phenomenon is further emphasised by the contemporary globalisation, where the concepts and terms used in valuation reports are used by investors all over the world.

The valuation of property as an applied economic science meets all the requirements made of a scientific discipline:

1. The field of the subject is defined – stipulation of value of property.
2. Observation of significant facts – evaluation of prices on the market, market analysis.
3. Formulation of hypothesis on how to set a value – cost method, income method, comparison approach, etc. based on mathematical methods and practices using verified input data.
4. Presentation of results from the hypothesis used and their testing, verification through observation, again market analysis.
5. If the results are verified, the hypothesis, the valuation method, is recognised at the present level of the science as correct and usable.
6. Institutional securing of the subject – professional chambers, periodicals, research projects, key workplaces.

Kuhn (1970) defined the basic scientific paradigm. This paradigm for the subject of the valuation of property exists, as can be seen in the overview above. Even though the paradigm does not explain all the phenomena, it defines the subject of investigation of this discipline, it is the basis for the selection of scientific problems, it characterises the method for resolving them and presents the criterion for the acceptability of the results achieved. The acceptance of a paradigm generally begins a new phase in the history of a scientific discipline – the period of a "normal" science, based on results, which the professional community currently accepts and considers as the basis for its further scientific practice. The aim of this "normal" science is the articulation and elaboration of the given paradigm, the concretisation of phenomena and theories, which the accepted paradigm enables. The further development of the subject in the stage of its scientific establishment, the valuation of property, does not yet need to be tackled at present. T.S. Kuhn describes this further development in three stages: normal science – critical situation – scientific revolution.

There are many reasons for this, but the basic one clearly relates to past development in valuation. As long as valuation was understood as a combination of reason and art, the adept could not be trained only in a specialised training centre, but had to undergo a longer practical experience. This gave rise to a situation where the student did not complete his/her university studies with specialisation in the valuation of property. Historically, the professional association retained the privilege of deciding who had reached such a standard that they could carry out valuation, and when. The social prestige of chartered surveyors (valuers, appraisers) was so high, as was their remuneration, that their education was not included in the ordinary university courses. Tuition took place mainly in the form of post-graduate courses and seminars.

As has already been said, science is changing and its development under the influence of the use of modern computer technology is immense. From this point of view, science has also become a political force. P.K. Feyerabend (1984) says: "Scientific opinions can eliminate the ideas that are against them only when one uses them as a party slogan. He must use them in this way with regard to the large number of non-scientific alternatives." The on-going globalisation calls for the co-operation of surveyors in the valuation of property. This is taking place among their national, European (TEGoVA) and worldwide (IVSC) organisations. The initial definitions, basic methods of calculation and the contents of valuation reports are being unified.

CONCLUSION

Some partial aspects of valuation were undoubtedly established on scientific principles. A wider use of these scientific methods was accelerated by the development of automated databanks and the progress in the sphere of quantification techniques and computer specialisations. The price, however, is still subject to the vagaries of the market in a highly dynamic and competitive environment. As a result of this, the valuer is faced with an almost infinite number of variable values influencing the price. The selection of the most fundamental of these depends on the creativity of the valuer. Their statistical evaluation and the valuations based on these are already exact scientific procedures: For this reason, I feel that the statement of the judge (Judge Jacobs ... 1996): "Valuation is an art and not a science, but is not astrology ...", should be altered at the beginning of the new millennium to read: "Valuation is a science in terms which in modern science have meaning". This would enable surveyors to participate also in the promotion of their profession on the academic floor and thus have more influence on the general opinion of value and its influence on the contemporary society.

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