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The application of welfare economics to taxation

T*heoretical approaches with different points of departure often concentrate on the very same subject, however, there are only few analyses in scientific literature that offer a comparison of studies with different approaches. I try to apply this conception in my paper. Within that, I dwell on questions that are “simple” to present with the theoretical approach of welfare economics, but their practical application raises doubts in many. I give a few examples to illustrate how theoretical models can be transformed into models suitable for concrete analyses. Then I sum up the most important elements of the views criticising the “traditional” theory of the welfare effects of taxation, and provide a summary of those critiques by pointing out the contradictions of theoretical models and practical applicability.*

Problems of welfare crop up in different layers in researches. One of the approaches examines the measurement of social welfare, within that giving more and more prominence to researches, and to indicators gained from them, that express a given society's level of development and wealth using indices or other financial indicators which demonstrate more general correlations of welfare than per capita output or income (GDP or GNI) indicators. The calculation of indicators is now relatively widespread, but in the majority of cases there is no uniform methodology and, in particular, appro-

priate database. There is no need to prove what difficulties arise from the comparison of income per capita in different periods (just think of the hectic price and exchange rate changes and the related conversion bias). Data handling presents problems even in the case of indicators that are seemingly easy to determine, such as measuring adult literacy, a component of the HDI (*Human Development Index*). Statistics naturally offer some sort of methodological guidance, but actual literacy may be significantly different from statistical figures, and estimations may entirely distort its result. There is another example: when measuring the HDI, average life expectancy at birth was calibrated between 25 and 85 years, however, in 1994, average life expectancy at birth was only 24 years in Rwanda, a figure which could not be fitted in the index (Husz, 2001).

Another area of application is the analysis of the effects of various economic policy measures, including the impact assessment of taxation or transfers. In these cases, it is (would be) necessary to measure a welfare change. Welfare change, however, cannot be measured directly, so researchers use proxy indicators. Results may vary depending on the selected indicators. These kinds of researches and methods are therefore sharply criticised by those who insist on the real presentation of welfare changes and

also by those who reject, from the outset the, welfare economics' method and logic of analysis resting on neo-classical principles.

The third are associated with our topic includes critical researches which intend to widen the concept of welfare, and make the efficiency and equilibrium criteria of traditional or *mainstream* economics the subject of criticism. Within this group, the evaluating and critical works of advocates of ecological economics deserve special attention, works which endeavour to extend the logical framework of traditional economics, and thus give an entirely new interpretation to welfare.

Finally, I attempt to give an answer to the question as to why the concepts of welfare economics continue to prevail in the field of applied researches, why there has been no paradigm shift so far as a result of criticism voiced by many and many times, and why changes have been made to certain components only.

WELFARE ECONOMICS – BRIEF SUMMARY

The New¹ Welfare Economics strives to evaluate economic situations from welfare point of view, situations that cannot be handled under the “classical” Pareto-principle. According to Pareto-criteria, social welfare change can be judged unambiguously if one economic player (or group)² is made better off, while the other (others) are not made worse off. Any situation in which one economic player (group) is better off, and the other is made worse off cannot be evaluated from welfare point of view with the Pareto-principle. The concept of the so-called potential Pareto-improvement is designed to offer a solution for that. In the 1930s, *Kaldor* (1939) and *Hicks* (1939) outlined this solution. Since then, that has been considered as a point of departure in the most diverse fields of economics (Cullis – Jones, 2003, Stiglitz, 2000).

According to the concept, comparison of two Pareto-optimal economic situations can be made by the possibility of compensation or bribe. The method can best be illustrated with the so-called utility-possibility curves. If situation A enhances the welfare of one player in relation to another situation (e.g. B), which worsens the welfare of the other player, then social welfare will improve if the loser can be compensated from the gains, and the winner would still be made better off after the compensation. In other words, the winner is able to compensate the loser. Its complementary side is the bribe: if the loser is capable of ensuring to the potential winner a welfare level the winner would have achieved in the new situation, and the loser is still better off than would be in the new situation, then the initial situation is better than the new one from the perspective of social welfare. An important element of comparison is possibility, i.e. social welfare change does not depend on whether compensation or bribe has actually taken place, but whether there is a possibility for it. This is called a Pareto-improvement.

Potential Pareto-improvement is generally illustrated with simplified welfare situations in the theoretical literature.³ It is worth observing the representation, because it signifies a critical component in the application of the welfare theory.

The presentation of compensation-bribe possibility is usually done by a consumption-possibility frontier curve. A utility-possibility curve shows utility distribution deriving from the possible distribution of a given set of goods between two individuals. In two dimensions it means that a change in the utilities attainable by economic players can only be achieved at the expense of one another. The function, in theory, does not require the measurability of utilities, but assumes it implicitly. The individual points of the utility-possibilities curve derive from the points of the so-called contract

curve. The function does not contain the absolute (cardinal) measurability of utilities, only assumes ordinal rankings. On the other hand, in order to determine utility-possibilities, it is necessary to know the proportion of changes which is difficult to interpret from ordinal rankings, i.e. it can only be constructed using actually measurable utilities.

The two extremes of the utility-possibilities curves represent the utility level which would be attained by the given economic player if the maximum attainable utilities were at his disposal. The set of points connecting the two extremes shows the utility combinations associated with the possible distribution of goods. The shape of the curve depends on the preference system of the two economic players. This function is concave in the case of “well-behaving” indifference curves.⁴ When the function is interpreted more generally, they only indicate that the utility-possibilities frontier is of a downward (negative) slope, because by diminishing the utility of one economic player that of the other increases. The uncertainty of a function's shape is often depicted in the litera-

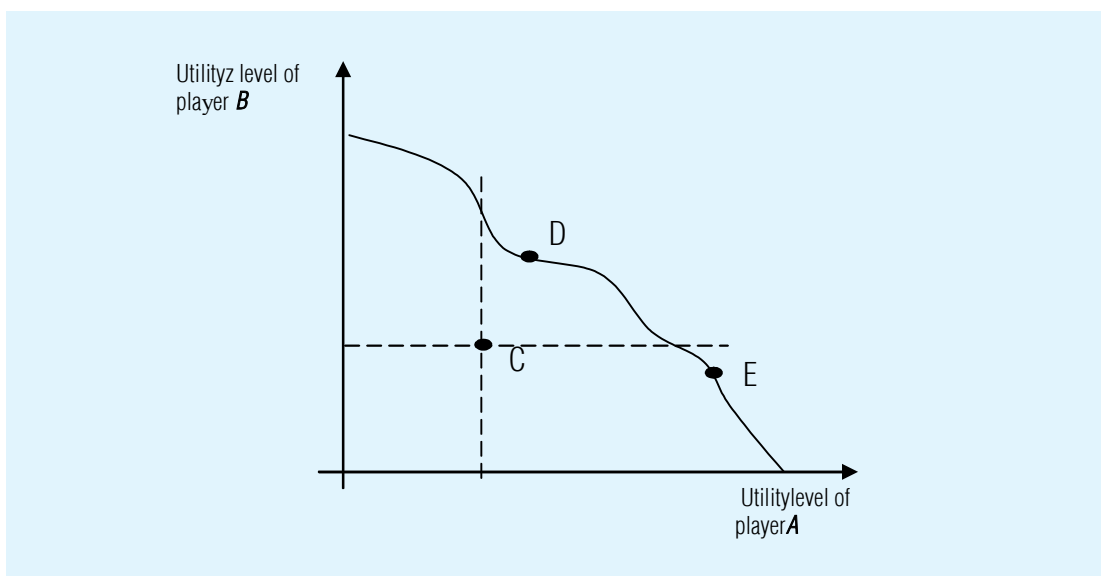
ture with a “sinuous” curve of an optional shape. (Cullis – Jones, 2003, Becker and partners, 1999). For simplicity's sake, sometimes linear shapes are used.

A utility-possibilities frontier curve can, first of all, be used to demonstrate welfare changes which may theoretically come about as a result of certain measures. If the possible trends of welfare changes with this method are “mapped” with this method, then the “only” thing to do is to assess and evaluate these changes. Then what can this approach tell us in theory?

The comparison of the three points marked in *Chart 1* represents the methodological starting point. First, every point that is on the utility-possibilities frontier is definitely better than the ones below the curve. The latter are not efficient points, as they do not make use of all the attainable utilities, i.e., the utility welfare level can by all means be increased by moving to the curve. This can be explained by standard microeconomic tools of analysis: two utility combinations are comparable by the Pareto-criterion, on the one part, and by the represen-

Chart 1

UTILITY-POSSIBILITIES FRONTIER (UPF-CURVE)



tation of preferences, on the other. consequently, point *C* in Figure 1 will result in a lower utility level than any points (for instance, points *D* and *E*) displayed on the utility-possibility frontier (UPF).

It is a different case when the points are on the UPF curve. These points are not comparable with each other even under the Pareto-principle, as this means that one economic player is made better off, while the other is made worse off.

These correlations can only be used for evaluating taxation if the utility interpretation is widened, i.e. if purchasable goods are examined instead of the consumption of a given set of goods, in other words, attainable utility depends on the consumer's disposable real income. (The amount a consumer can purchase from a given set of goods.)

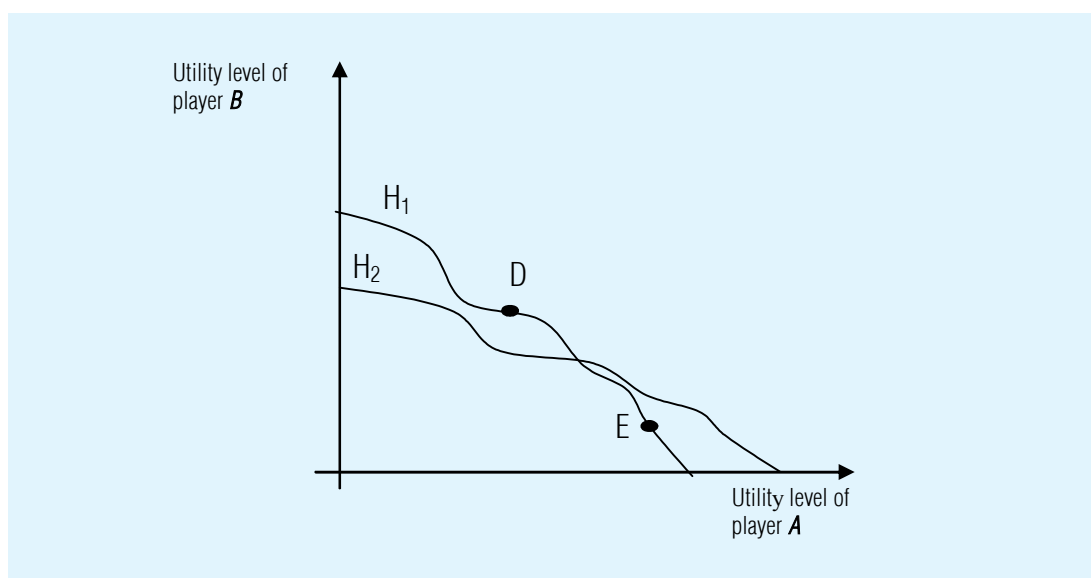
This method is used for evaluating hypothetical tax changes. Let us assume that a government changes the level of income tax rate and reduces its progressivity. For simplicity's sake, linear income tax is introduced instead of the former progressive income tax. As a conse-

quence, the situation of individuals with different income will change differently: the real income of some will grow, while that of the others will decrease. Let us suppose that as a result of that the UPF-curve changes as shown in *Chart 2*. The figure shows that the maximum utility level of economic player *A* will be higher due to the change, while that of economic player *B* will be lower. The welfare change depends on the actual initial utility distribution, and on the type of distribution that will develop as a result of the change.

If the initial utility distribution is *D*, then no point can be found on *H2* that would improve the position of both economic players. Thus, in that case, the change is unfavourable for everyone. On the other hand, if the initial situation is in *E*, then there is a utility distribution that is more favourable for both economic players under the new conditions. According to the concept of potential improvement, economic players do not necessarily have to experience a de facto improvement in their position, instead what is really significant is that the winner should be capable of compensating the loser.

Chart 2

INTERPRETATION OF A POTENTIAL PARETO-IMPROVEMENT



The above situation may however lead to contradictions. The points left from the intersection of the two curves furnish proof that returning from the new situation to the original will be potentially better. That is to say, that the losers would be capable of bribing the winners by assuring them a utility level corresponding to the first situation. In order to eliminate this cyclical problem, *Scitovsky* (1941) proposed double criteria for the potential Pareto-improvement. Based on that, it needs to be demonstrated that the winners of the change can compensate the losers, and thus they argue for the change (Kaldor-criterion), and it needs to be demonstrated that the losers cannot bribe the winners (Hicks criterion).⁵

This type of evaluation of social welfare change is explicitly related to the normativity of economics. *Pareto* originally thought that out of two optimal situations the one that society judges superior should be chosen, i.e. he proposed ethical principles be applied in the evaluation. Under the concept of the new welfare economics, there is a need for tools and methods which are free from any social value judgement and can only be evaluated on the basis of stringent and rational efficiency principles. In Kaldor's view, "There is no need for the economist to prove – as indeed he could never prove – that as a result of the adoption of a certain measure nobody in the community is going to suffer. In order to establish his case, it is quite sufficient to show that even if all those who suffer as a result are fully compensated for their loss, the rest of the community will still be better off than before" (Kaldor, 1939).

Not even the original and expanded version of the Pareto-principle is suitable for selecting the best of the utility possibilities. Social utility functions serve that purpose. There are diverse ways of interpreting the functions (Varian, 1995, Berde – Petró, 1995), based on which there are various methods to select the optimal of the utility-possibilities.

In its most common interpretation social welfare is described with a standard tool of microeconomics. Just like a household consumption function which is drawn as the quantity of various goods consumed and as the function of household utility, similarly, a society's welfare functions can be derived from the utility functions of its members. The so-called social indifference curve can be constructed with the social welfare function. Each point of the curve contains individual utility combinations which produce the same aggregate utility, i.e. the same social welfare. As a result, social welfare maximization opens to two interpretations:

- With given resources, a utility distribution will result in maximum social welfare under which distribution the utility-possibility curve is tangential to the highest social indifference curve;
- The highest social welfare can be achieved by moving the utility-possibility curve outward, i.e. increasing the production.

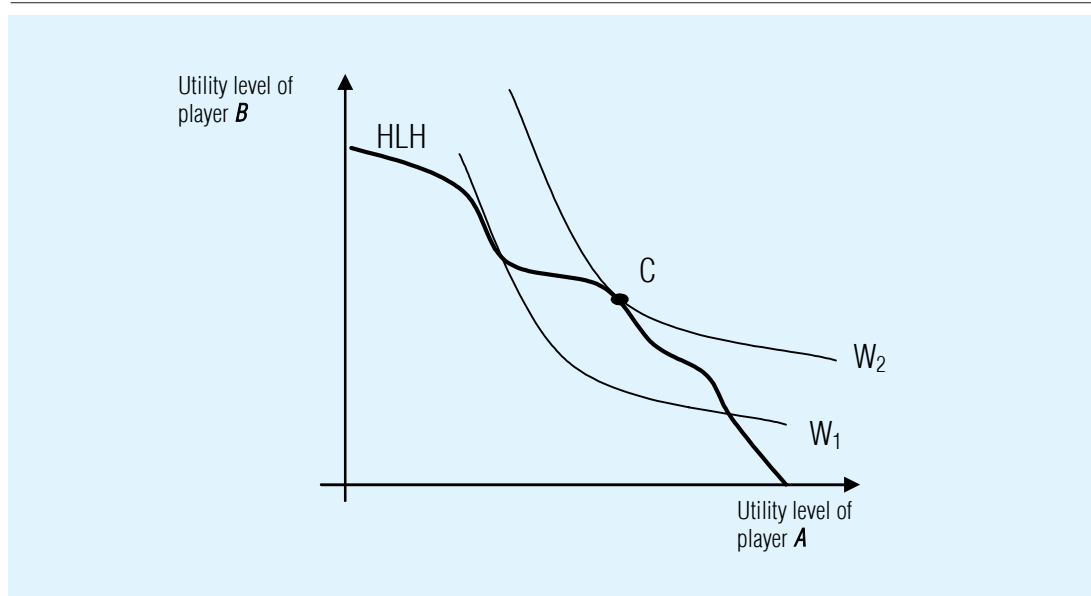
Chart 3 shows a utility-possibilities frontier (*UPF*) and social welfare indifference curves (W_1 and W_2) of a society consisting of two individuals. The maximum welfare of the society is indicated by point *C* under given conditions.

The social welfare function also represents an equity standard. It is easy to see that the greater the aversion from inequality the steeper the social indifference curve, i.e. those becoming "poorer" must sacrifice an increasing amount of utilities to assure that the welfare of those becoming "richer" is increased by a unit of utility.

IS SOCIAL WELFARE MEASURABLE?

As described above, it is indispensable for us to have some sort of an indicator of social welfare and social utility for analysing the effects of

MAXIMUM WELFARE OF THE SOCIETY



taxation. A social welfare function cannot be constructed in the form it is represented in the theoretical literature. Welfare functions are based on individual preferences which are however not known. It would therefore be necessary to construct the social welfare function in another form. In most cases, there are only indirect solutions which approximate social welfare using *proxy* indicators. The selection of indicators depends on whether it can be accepted as a hypothesis that there is a correlation similar to a curve constructed under microeconomic principles.

Welfare approaches based on neo-classical principles rely on the assumption that widening consumption leads, at the same time, to greater social welfare. According to the above approaches, social output (GDP per capita and consumption per capita within it) is thus the indicator suitable for the measurement of welfare. Simulation models used for analysing the impact of economic policy measures on households also rest on the same principle. The critical views according to which output and consumption are not suitable for the measurement

of social welfare are more and more widely accepted.

Certain concepts even question whether social welfare is a rational idea at all, namely, whether the social welfare function is theoretically acceptable. Within this group, the Austrian school represents the most consistent and critical standpoint. Its axiom is that neither individual utility functions nor indifference curves exist. Judging utility is possible in one way only: on the basis of human actions. All preferences must be revealed in actions. But these actions are individual and discreet, so the existence of continuous individual utility functions is not possible (Mises, 1966). Since indifference cannot be demonstrated in action, therefore indifference cannot be demonstrated at all. “If a man were really indifferent between two alternatives, he could not make any choice between them, and therefore the choice could not be revealed in action” (Rothbard, 1962). If there are no individual utility and indifference functions, there can be no social indifference or welfare function either. On the other hand, the social welfare function implies that society

makes the choice, individuals make collective choice from different combinations. And that is an absurdity in the opinion of the Austrian economists.

The majority of critics are naturally much more “understanding”. The most well-known among them is *Amartya Sen's* whose concepts are accepted by a large number of followers. In Sen's view, on top of financial resources there are other factors equally important in individual preferences determining the quality of life. Welfare depends on the availability of possibilities by the acquisition of much-valued life conditions.

Researches made great headways in the 1980s. They were aimed at developing measurement of the quality of life (a new concept of social welfare). The UN, the OECD and the EU have provided considerable funds for the researches, since these organisations considered it more and more important, for various reasons, to compare the welfare levels of member states more comprehensively than allowed by production and consumption indicators. Endeavours to improve the quality of life became integrated into political programmes, too.

The indicators developed can be classified into two groups. One group includes approaches which focus on individual evaluations and try to apply various subjective measures. The other is composed of views which complement indicators designed to measure production output with the measurement of social-level phenomena. That latter group contains the most well-known welfare indicator, the Human Development Index (HDI). The HDI is based on the assumption that, apart from the quantity of consumption, people's quality of life is determined by long and healthy life and educational opportunities. The opportunities referred to are measured by life expectancy at birth, adult literacy rate and average time of education. Indices of human devel-

opment have been calculated on a regular basis since 1990 within the framework of the UNDP.

Measuring subjective welfare is still in an experimental stage. Although such measurements are performed regularly in certain countries (for instance, in the USA, Netherlands and Germany), systematic and reliable data are nevertheless still fragmentary, which limits their use in decision-making. (Husz, 2001, Hegedűs, 2001, Lengyel, 2002)

Experts addressing the issue of environmental problems have made considerable contributions to the development of welfare indicators. Environment is typically a factor that determines quality of life and occurs neither in market relations nor in social living conditions.

The *Index of Sustainable Economic Welfare* (ISEW) was developed in 1989 by *Herman Daly* and *John Cobb*. Their purpose was to demonstrate that there is no correlation between the change of GDP and genuine welfare: GDP growth and economic growth are not accompanied by a welfare level increase of individuals in the society. Its advantage, compared to GDP, is that the index not only considers a given year's consumption, but reflects a long-term approach. It takes into account income distribution, household and communal services and long-term environmental damages.

The calculation of the *Genuine Progress Indicator*, i.e. GPI, – similarly to the ISEW – is based on the country's personal consumption corrected with the factor of income distribution, and then modified with factors expressing further social and ecological costs and benefits. The indicator was coined by *Clifford Cobb* and his partners in 1995 (Marjainé, 2005, Kerekes, 1998, Kis – Pál, 2006).

Welfare indicator estimations are also made in Hungary, however, they are only fragmentally taken into account in economic policy decisions. (Lengyel, 2002, Marjainé, 2005) Much more detailed and accurate calculations are

available for aspects that are more directly related to economic policy decisions, including taxation decisions.

MEASURING THE WELFARE EFFECTS OF TAXATION

Following the principles of welfare economics, the welfare effects of an economic policy measure could be demonstrated if it could be told how the utility level, or more widely the welfare, of economic stakeholders will change. Strictly speaking, individuals' utility functions and their preferences associated with different income and price levels should be known, and in the knowledge of the above factors, even a potential Pareto-improvement could be established.

A fundamental problem of welfare economics is that the axioms of consumer decisions relate to only one individual or representative economic player, but the theory fails if there are more persons concerned. If there are two or more individuals, it cannot be proved – under the narrow interpretation of the neo-classical theory – that a decision is preferred by more as opposed to less.

To resolve the problem, indirect evaluation can be applied. Indirect evaluation is partly based upon the development of income, upon consumption levels associated with different incomes as well as questioning. Questioning is primarily aimed at connecting individual income levels with utility. The surveys endeavour to show the evaluation of income units, and then reconstruct some social utility function from them.

The so-called micro-simulation model is a typical method to deal with the above problem, and it models household decisions based on impact assessments. Such models have also been prepared in Hungary, and are used for impact assessment of economic policy and taxation

decisions (Benedek – Lelkes, 2005, Benedek – Firlé – Scharle, 2006).

What theoretical and methodological criticism can be raised against these methods?

One of the problems is that these solutions look upon, first of all, income (including consumption or saving) as an almost exclusive measure of welfare. The models are based upon the purchasing and saving habits of a given time (or an earlier period). They are thus not able to take into account changes induced by taxation changes. These limitations are clear both to those who construct and use the models. They themselves point out that the models are suitable for showing the directions of changes only, but not for forecasting accurately the actual effects.

The other essential issue is how the questioning is conducted, and what models are created as a result of the inquiry. We can only give an indication of the problems in our paper, because each survey represents them in different forms.

When designing questionnaires, question construction already assumes a certain direction of replies. If the responder gives (or gave) a different answer than expected, it is disregarded or left in the group of hypothetical evaluations. For instance, responders are requested to give market or monetary value to each object, although it may not correspond to their scale of values.

Consumer behaviour is generally simulated on principles formulated by neo-classical microeconomics. As a result, simulation models are not able to handle consumer behaviours that diverge from the neo-classical axioms and are already supported by evidence. To illustrate the above, please refer to the summary offered by *John Gowdy* on the possible differences. (See *Table 1*)

Experience shows that individual preferences are often irregular. Lexicographic preference means that a consumer is not willing to accept substitution, i.e. gives absolute preference to

Table 1

**DIVERGING NEO-CLASSICAL AXIOMS AND EXPERIENCE
IN CONSUMER BEHAVIOUR**

Expressed preferences	Consumer decision axiom	Behaviour assumptions
Lexicographic preferences	Continuous utility function	Everything is marketable
Hyperbolic discounting	Time preference behaviour	Straight-line discounting
Endowment effect	Symmetric rationality	Willingness to pay = willingness to accept
Interaction of individual preferences	Independent consumer decisions	No collective decision/public choice, no altruism
Process-dependent preference	Outcome-dependent preference	Process is irrelevant, only the final outcome matters

Source: Gowdy, 2004, page 246

one product or, in a general, one necessity to another. The consumer is not willing to give up a given necessity no matter how much it costs. (This behaviour is also typical in case of addictive goods, where even high prices are not enough to divert one from consumption.)

According to the traditional micro-economical assumption, individuals place a higher value on present utility than on a future one. (There is less value set now on future expected utility the degree of which is the same as today. So the present value of future expected welfare is less than its future value.) If however a consumer's time preference is "inconsistent", then he sets the same (or perhaps higher) value on future utility than on a present one. This behaviour is apparent, for example, in one's inheritance trends and in sacrifices made for preservation of the environment.

The results of experimental economics show that a good proportion of people hold on to objects they have obtained, and generally place a higher value on objects they own than objects they do not. (The phenomenon is referred to as endowment effect.) In other words, people do not always have to pay for what they look upon as better. The difference between giving preference (acceptance) and the willingness-to-pay poses a methodological difficulty in the evaluation of public goods and services or environmental elements.

Preferences, the judgement of utility, often depend on the process of decision making and on how one's needs are met. Wrong conclusions can be made if no notice is taken of that, and consumer decisions are modelled only in view of results.

We have long been aware of how consumer behaviours influence each other. These phenomena are partly known (demonstration effect, snob effect, etc.), nevertheless, their consequences cannot or can only be assessed subsequently.⁶

The use of modelling solutions and proxy indicators may, at times, lead to conclusions inconsistent with the initial assumption. Indicators and indices suitable for measuring horizontal equality are widely used for measuring taxation effects. These are normally created by giving different weights to various income groups, and thus balance (presumed) welfare gaps. On the other hand, if the mentioned weights do not correspond to actual utility differences, then taxation calculated on horizontal equality indicators may worsen actual social welfare contrary to its specific objective of achieving a potential Pareto-improvement (Kaplow, 2000).

The other area within the welfare effects of taxation to be analysed is the application of the so-called utility rule. The utility principle of taxation sets out that taxation should be in

conformity with the utility of public services financed from taxes. In order to assess prevalence of the principle, it would be necessary to know the utility of public goods and services. The assessment of public goods and services is often made by cost-benefit analysis. The method's criticism is discussed in the section on environmental problems, where similar incidents are involved.

NATURAL ENVIRONMENT AND TAXATION

The mainstream school of environmental economics follows neo-classical principles. Its widespread toolbox (taxation, market for pollutants, determination of emission, etc.) means, in theory, the application of welfare economics principles to negative externalities. The appropriateness of the tools and principles is strongly attacked by proponents of ecological economics. The basis of the criticism is that rules formulated up and applicable for market economy cannot and must not be applied for the natural environment. The coexistence of natural environment and human society can however hardly be looked upon as a market problem. As a result, it is not possible to analyse environmental damage rehabilitation, preservation of the natural environment and the safeguarding of sustainable development with the tools of traditional economics.

The main strain of criticism can be summarised as below. Based on the assumption that there is a correct and optimal price, and thus there is an optimal balance, for every environmental service, the economic theory proposes that polluters are to pay all the marginal costs of the damage caused by them. This provides an incentive for diminishing the damage to a socially optimal level. The practical means of that approach include Pigovian taxes, negotiable permits and reimbursement of stocks. The disadvantages of such economic tools have

been identified: negative income redistribution effect, smaller environmental effect than with direct regulation, and it is difficult to establish the amount of the necessary tax that assures the theoretical optimum.

The main principle of the traditional approach strives after accomplishing social efficiency, which is expected from market-based incentives in the environmental policy. Evolutional features are ignored in policy development, i.e. quality changes that are irreversible and unpredictable and do not move along equilibrium situations. The starting point of efficiency is in any case short-lived and weak. An environmental policy based on cost-benefit calculations measured in monetary terms entails the risk that it stimulates/supports sustainable economic-social components and sacrifices long-term stability for the sake of short-term optimum and efficiency. This also applies to climate policy, in which economic researches are centred on optimalization (van den Bergh, 2004).

CONCLUSIONS

Since the birth of the science, economists have paid utmost attention to the role of the state, including within that governmental finances. One of the main goals of economics is to show why there is or there is no need to influence the functioning of the economy with governmental instruments. No matter what economic philosophy a government follows, what proportion national revenue centralization reaches, what role a government assumes in the provision of various public goods and services, there is a need for tax revenues to fulfil the functions. Taxation is therefore indispensable in any economic analysis on the role of the state. The problem can be approached from different aspects even in the theory: macroeconomics, microeconomics, community-based econom-

ics, welfare economics, public finance and the theory of public choice alike treat taxation as a priority but from different points of view. Almost every theoretical and applied economic area tries to establish “optimal” or “efficient” taxation principles for the evaluation of a tax type, tax rate or a tax system.

Theoretical approaches with different points of departure often concentrate on the very same subject, however, there are only few analyses in the literature that offer a comparison of studies with different approaches. I have tried to apply this conception in my paper. Within that, I have dwelt on questions that are “simple” to present with the theoretical approach of welfare economics, however, their practical application raises doubts in many. I have given a few examples to illustrate how theoretical models can be transformed into models suitable for actual analyses. Then I have summed up the most important elements of the views criticising the “traditional” theory of the welfare effects of taxation, and provided a summary of those critiques by pointing out the contradictions of theoretical models and practical applicability.

The welfare effects of taxation are given special attention in each country's economic impact assessment. The methods of analysis rest, in most cases, upon the principles of traditional welfare economics with the intention to represent them in one way or another. On the other hand, the economic literature has already made several critical remarks on welfare economics based on neo-classical principles, and pointed out that erroneous conclusions and wrong solutions may be made by basing analyses exclusively upon these principles. The analyses rely upon past behaviour, and assume economic players behave in a way which, to a large extent is, no longer relevant. Calculations may therefore produce distorted results.

The critical comments that the expected impacts can only bring short-lived results and may abandon long-term national economic goals are also worthy of consideration. If governments pursue only short-term goals in tax competition (Losoncz, 2006) and disregard the welfare impact of direct investment inflows, then they may sacrifice the short-term welfare of the national economy for the sake of long-term objectives.

How can it be explained that economic advisors and those who prepare decision making ignore or hardly consider the critical remarks put forward for several decades? I believe it has two main reasons: first, the academic thinking and the general economic view insist strongly on panels applied by welfare economics. According to neo-classical principles, closed systems can be built and models which are fully adjustable to the concept of the economy. Critics' proposals “knock down” those systems. There are few solutions which have brought about such a uniform system. Many hold the view that the replacement of certain elements would give rise to inconsistency. The other reason why the critical comments are passed over is that an economic database is still to be set up with the help of which alternative approaches could be quantified at national economic level. It would be necessary to apply the qualitative method of cost-benefit or to conduct a regular inquiry involving a large number of respondents for the broader interpretation of welfare, efforts that are not or only partly financed by governments.

The situation gives cause for alarm, since politicians keep asserting principles that are accepted by the majority of economists as commonplace. For this reason researches must more often emphasise the importance of alternative approaches.

NOTES

- ¹ The word “new” indicates that the Pigovian welfare economics resting upon traditional (measurable) utility is replaced by the Paretian interpretation of the general equilibrium theory which is based on the ordinal utility concept. The critical remarks will reveal that the ordinal interpretation “steals back” the measurability of utility into the theory, and thus the difference between old and new is of a methodological nature.
- ² The original welfare theory is concerned exclusively with individuals. A frequent topic of welfare debates is the interpretation of welfare to groups or to society as a whole. The debate is centred on whether utility can be added up, and if so, how it can be added up. We will come back to this problem when talking about the debates around the social welfare function. For the time being, we assume that a group's welfare can be determined.
- ³ The representation makes it easier to understand the essence of the analysis, however, such a situation analysis cannot be conducted in reality.
- ⁴ For the fundamentals of microeconomical analysis see Varian (1995) Chapter 30
- ⁵ De Gorman (1955) proved that the Scitovskian solution undermines the assumption of transitivity.
- ⁶ The irrational indebtedness of a part of Hungarian households is probably the result of such mutual influences. The tempting consumption opportunities and the consumption habits of these with higher income “encourage” lower-income households to take up credit.

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