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Measurability of cultural benefit impacts emerging in fields of recreation in cost-benefit analysis

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Abstract: The study is dealing with a less researched field of cost-benefit analysis: the measurability of the cultural benefit impacts emerging in fields of recreation. On one hand, related to public policy decisions in Hungarian and international literature, it points out that the theoretical methodological questions of analysing benefit impacts in cost-benefit analyses are not clear-cut. Related to this, the author has constructed a model that contains the most important method-components of the benefit impact analysis. On this methodological basis, the research examines how the cultural effects of individual public policy decisions can be measured.

Keywords: cost-benefit analysis, cultural benefit impact, recreational activity, method-components of benefit impact analysis

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Introduction

In Hungary, the method of cost-benefit analysis got into the focus of attention after the change of regime. However, the roots of the method date back to the 1800's. Basically, the methodology is a decision-supporting procedure that compares every monetary and non-monetary, i.e. the full scale benefit impact of all decision variants to the costs. In this approach, it is mainly used to substantiate public policy (municipal and governmental) decisions. Theoretically, it could be applied in the business sector as well, however, in that sector the interests are linked to yield-effects manifesting themselves in the form of money.

Recommendations in the literature related to the topic clearly point out that the theoretical methodological questions of benefit impacts in the cost-benefit analysis of projects falling within the competence of public policy decisions do not form a uniform school of thought. Related to this, I have constructed a model that contains the most important method-components of the benefit impact analysis (Fodor, 2012).

In this study, following the presentation of the major types of benefit impacts and the most important method components of their analysis, I am dealing with the analysis of recommendations in the literature related to the measurability of cultural effects of public policy decisions in connection with recreation, i.e. the useful spending of spare time. Culture is essentially a hard to quantify factor effectual on social level with an organising force affecting the way of thinking and the behaviour. Due to its nature, the benefit impact emerging in this field is to be considered one of the most difficult to measure factors.

1. The cost-benefit analysis in the Hungarian and international literature

Cost-benefit analysis is a methodology with a decades-long past. As a theoretical scientific category, it is a method related to the welfare-economics which can be used to analyse public assets. As early as in the 19th century there were recommendations related to this in the literature, however, these were only very initial cost-benefit analysis-like calculations.

The first to go into this issue was Albert Gallatin in 1808 in the USA. Following his advise, it was attempted to evaluate the costs and benefits of a water related project (Hanley and Spash, 1993: p. 4.). In Europe, the first application of the cost-benefit analysis can be attributed to Jules Dupuit, a French economist who, in a paper published in 1844, realized the concept of the consumer surplus that still plays an important role in determining the social benefit in the cost-benefit analysis. Generally, the benefit is in connection with the value judgment of the customer. In other words: if something is advantageous for the customer, it can be regarded as a benefit. In the application of the method, the extent to which a person appraises or estimates something is determined by the extent he/she appraises the public assets. Dupuit pointed out that for example the benefits originating in the use of roads and bridges exceed the tolls to be paid for their use (Mishan and Quah, 2007: p. 243).

The next milestone in the application of the method was the Flood Control Act of 1936, issued with the contribution of the U.S. Army Corps of Engineers, which required the costs to be determined and the benefits to be estimated in federal water resource projects. These required analyses that were not yet based on the methodological basis of the cost-benefit analysis and, compared to that, they can be regarded as rather crude solutions.

In the United States in the 1950's, the application of the cost-benefit analysis was extended to areas in connection with public interest other than water management, such as education and public health-care. With the help of economists, the "Green Book" containing the principles, norms and processes related to the carrying out of the cost-benefit analyses of projects related to the hydrological basin of rivers was published in 1950. In it's that time form, however, the method was not yet concerned with social values. Later, the Green Book had been updated several times.

In 1958, Otto Eckstein defined a more modern variation of the cost-benefit analysis. Eckstein laid out the foundations of the method to be later known as social cost-benefit

analysis in the welfare-economics. He demonstrated the application of the method in the field of water resources development (Tanzi, 2011: p. 172).

The real change in the application of the method was triggered by President Ronald Reagan's Executive Order 12291 of 1981 which requires a so-called regulatory impact analysis (the initial method of the cost-benefit analysis) to be performed in the case of government projects the costs of which exceed one hundred thousand USD (Rodriguez, 1988: pp. 505-546).

In Europe, the development of the method is different from that in the United States. Its application started in effect with the directives elaborated by the European Union which require a cost-benefit analysis to be performed on a mandatory basis in the case of major investments.

The cost-benefit analysis applied in the Hungarian practice has become a widely applied practical method since the change of regime. In comparison with the initial solutions, it has undergone considerable changes in the meantime. The changes are still in progress. Compared to the international practice, however, there is not yet a practice in this area that could be regarded as full-fledged. We can encounter with the obligations and requirements related to the application of cost-benefit analysis in several areas of Hungarian and European laws. The turn of the millennium brought an upswing in the application of the method in Hungary. A government resolution required that "every ministry and central administrative authorities [...] have to take care of the cost-benefit analysis of the decisions and the performance analysis of the work done. The tasks related to them are determined in the annual schedule" [Government Resolution 1052/1999. (V.21.)].

In Hungary, based on European and international theoretical and practical experiences, a number of methodological guides have been published the purpose of which is to provide uniform guidance on the economic evaluation of projects realised with EU support. Such guides are, for example the guides published in 2009 on the methodology for sewage disposal and treatment, waste management, road development, railroad development and public transport projects (National Development Agency, 2009a, 2009b).

We can encounter with recommendations related to the process of cost-benefit analysis in both Hungarian and English language studies. According to a number of researchers, the cost-benefit analysis of a project is preceded by a preliminary, sketchy financial analysis. The numerical determination of the costs and incomes within the financial analysis is followed by the most important part of the analysis which can also be regarded as social-economic analysis: the cost-benefit analysis itself. Here we determine the benefit impacts that do not form part of the financial analysis, such as environmental impact, the effect of changes occurring in the individual's mentality, behaviour, etc. (Határon Átnyúló Együttműködési Program, 2006: pp. 9-12).

The steps of the cost-benefit analysis are listed in most of the sources as follows (Bartus et al., 2005: pp. 5-6):

1. deciding whose preferences, i.e. benefits and costs, are taken into account,
2. choosing the alternatives to be evaluated,
3. specification of all possible impacts and the selection of the appropriate index-number,
4. forecasting of the impacts,
5. monetisation of the impacts,
6. discounting,
7. summarizing of the costs and benefits,
8. sensitivity analysis,
9. choosing the alternative providing the best net social benefit.

The special care of the cost-benefit analysis is when a task determined as mandatory by legal regulations has to be performed. In this case, is not necessary to perform a "real" cost-benefit analysis; the most important task is to reduce the costs. (Fekete, 2011).

2. The appearance of cultural impacts in the literature

The projects falling within the competence of public policy decisions may be realised in different sectors, such as industry, construction industry, commerce (organising primary producers' market or monthly fairs), public catering, education, health-care, etc. When analysing projects to be realised in these sectors, various effects have to be taken into account. Such an effect is the cultural benefit impact which may influence the decision.

Culture is a most complex concept defined in different ways during the development of the society. According to Geert Hofstede, culture is "the collective programming of the mind distinguishing the members of one group or category of people from others... the sum of common characteristics influencing human responses to the changes of the environment." According to Fons Trompenaars, "culture is the way a group of people solves problems and reconciles dilemmas – these problems, which are regularly solved, then disappear from their mind and become basic assumptions, obvious premises. These basic assumptions then define concepts which will be interpreted in the same way by the members of the group" (Lasserre, 2008: pp 301-324). The definition of the word culture in the Magyar Értelmező Kéziszótár sounds: "the sum of material and intellectual values produced by humankind. A certain field of civilisation and its manifestation in a certain era, with a certain people" (Juhász, 1987). So culture is basically a factor effectual on social level with an organising force affecting the way of thinking and the behaviour. Based on this approach, the study examines the relationships of the cultural effects of projects to be realised on the basis of public policy decisions.

In the case of a given project, the realisation of not one but numerous impacts or even the drop-out of a part of the impacts must also be taken into account. The project to be realised on the basis of a public policy decision results in a number of benefit impacts. Such a benefit impact is if a project contributes to the development of the population's environmental-conscious way of thinking, to the development of a townscape influencing the general state of health of the settlement's population, etc. For example, the municipality makes a settlement more livable, pleasant and attractive for its population if it plans to develop and/or renovate a public park or pedestrian precinct in the public space of the settlement. The most evident function of the development and/or renovation of parks is their role in the settlement's ecological system (for example they provide clearer air). Moreover, along with increasing the touristic force of attraction of the settlement and its historical value, they provide an opportunity for relaxation as well [Government Decree 253/1997. (XII.20.)]. Its social role is that the clear air and tranquil environment helps various social strata to meet and amuse. Thus it contributes to the development of people's moral behaviour (Mikle, 2005). The cultural benefit emerging with the realisation of such a project reshapes the relationship of people on long term. They may learn good manners and politeness from one another.

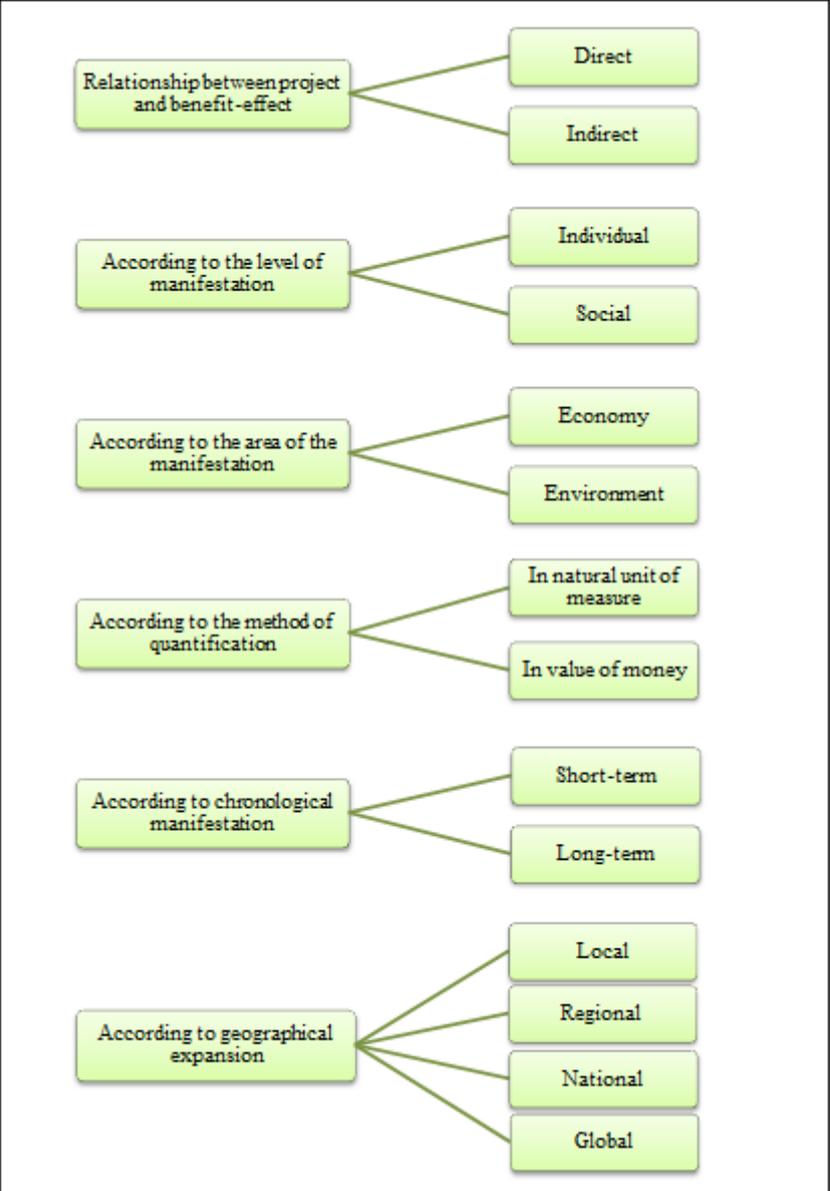
3. Analysis of cultural benefit impact emerging in fields of recreation

Since a significant part of the project decisions is related to reconstruction (modernisation of a sewage treatment facility), development, renovation (for example, renovation of a playground, reconstruction of a stadium), institutional or communal investment the benefit impacts emerging with the realisation of the project may be classified according to various aspects. We have to examine the recommendations in the literature related to the emergence of benefit impacts which are to cast a light on the determination of the cultural effects of projects related to fields of recreation and falling within the competence of public policy decisions. Recreation means providing a good general state of health, a good quality life, etc. Recreational activity is an activity related to entertainment, hobby, sports, etc. activities.

It makes the analysis more complicated that the theoretical methodological questions of determining the benefit impacts in public policy decisions are not clear-cut. Figure 1. contains the most important methods of benefit impact analysis. This technique of dividing

the methodological procedures into elementary methods is applied by Illés (1990) to explore corporate profit orientation and the internal structure of cost accounting calculations.

Figure 1: The most important methods of benefit impact analysis



Source: Fodor, 2012

The benefit impacts may simultaneously be characterized according to six major aspects, so there are simultaneously six features related to the benefit impacts. The benefit impacts, according to the main features, may be divided into elementary methods. These elementary methods are not completely independent from one another; the application of certain methods may simultaneously result in other possible solutions as well. It may also happen that a benefit impact analysed according to a certain aspect is simultaneously characterized by different elementary methods. For example, the benefit impact may simultaneously manifest itself at individual and at social level as well.

1. The relationship between project and benefit impact

In the cost-benefit analysis of projects falling within the competence of public policy decisions, the benefit impact may manifest itself either directly or indirectly and it may also

happen that the same benefit impact can be considered both direct and indirect simultaneously. In the field of culture, this direct and indirect nature means how a project to be realised within a public policy decision influences the way of thinking and behaviour of the individual and that of the community. The direct benefit impacts, save for a few exceptions emerge for the former customers, for the potential consumers as well as for the contractor/operator. Meanwhile, an indirect benefit is not directly related to any of the public policy decisions.

For example table-tennis (also known as ping-pong) affects not only the acting individual but, directly and indirectly, everybody in his/her ambience, his/her social relationships. With each participation in the game, the individual gathers experiences, gets acquainted with the rules which facilitate the next participation thus motivating the continuous learning of the sportsman/sportswoman. The same goes to the spectator of sport events who becomes more and more conversant with the rule-system of the sport. The cultural benefit impact of the activity is the proper physical, mental and social well-being of the individual that affects the development of the individual's socially accepted behaviour (Neulinger, 2007).

2. The level of manifestation of the benefit impact

An essential question in a cost-benefit analysis is to determine whose benefits will be taken into account in the analysis. In most studies, the effect-components emerging with the realisation of the project are presented divided into individual and social effects. Out of the communal benefit impacts both the individual and social benefit are of significant importance, therefore their interpretation requires particular care.

In the cost-benefit analysis of the projects falling within the competence of public policy decisions, the cultural benefit impact emerging on individual level reflects the individual's way of thinking. In other words, it means how the project changed the individual's feeling of safety, environment-consciousness, etc. Its manifestation on social level means the changes occurring in the given community's quality of life, division of labour, systems of value, family relationships, way of life, safety, moral principles, creativity (Rátz, 1999).

3. The area where the benefit impact manifests itself

The cultural impacts of the projects to be realised on the basis of public policy decisions may manifest themselves in the area of the economy and in that of the environment as well, however, in most studies these are often smeared. The economic effects manifest themselves chiefly in the areas of employment-unemployment, competition, relationships between market participants, innovation effects, R+D effects, etc. The purpose of the assessment of the environmental impact is to analyse the effects of the project on its natural environment, such as pollutant emission, assessment of the changes in the impacts on natural habitats.

For example, in the case of the realisation of a project related to the development of a public park or a pedestrian precinct, the benefit impact to be taken into account manifests itself in both the field of economy and environment. The planted trees clear the air, provide protection against noise, etc., thus decreasing the amount of money to be sacrificed on the prevention and reduction of air- and noise pollution (Szabó, 2005). The development of a green space contributes to the development of a more beautiful, more livable environment which also influences the general state of health and the way of thinking of the people. The selective collection becomes a part of the population's everyday life, which means the development of an attractive townscape, the improvement of the region's and the settlement's competitiveness. Parks may contribute to the increasing of the settlement's tourism, additionally providing employment possibilities as well (Sándor, 2002). According to Lukovich (2001), the well-kept public places, by emphasizing social control, contribute to the improvement of public safety on long-term.

4. The method of quantification

Due to the nature of culture, the benefit impact emerging in this field is to be considered one of the most difficult to measure factors. In most cases, benefit impacts may be determined in natural units of measure or in a value of money. In order to make the benefit impacts emerging as the expected results of a project comparable, sums of money have somehow to be attached to the factors determined in natural units of measure in order to make them expressible in value of money. Due to several reasons, the quantification of the benefit impacts is difficult in the case of project variations related to public policy decisions. One of the most important of these reasons is the fact that the benefits may be of different nature, they may either be monetised or they can not be expressed in terms of money; they can be of quantitative or qualitative nature. The benefits have somehow to be converted in order to make them comparable and enable the calculation with the entire economic value of the given investment project.

In order to get acquainted with the social function of public parks, the habits of using the parks and their changes, most researchers collect data with questionnaires and perform an on-site survey (Mikle, 2005). However, before the realisation (during the preparation of the decision-making) the determination of the benefit impacts to be taken into account is not an easy task. It is not practical to break away from the existing cultural norm systems of the given community in order to allow the measurement of, for example, the improvement of public safety or that of the relationships of people. Taking the system of norms into account, it is not evident that the possibility of change will always be judged as an improvement and it is not certain whether the population will be able to judge what the change will mean for them. To develop some kind of experience-based benchmarking system could be helpful in this regard.

5. According to the chronological manifestation

From a chronological point of view, the benefit impact may manifest itself immediately but also years or even generations later. Generally, the cost-benefit analysis must cover the useful lifespan of the project variations. However, this chronological manifestation in the field of culture is different from the general one. Once a higher level of development is achieved, it is not certain that a regression will take place as soon as the life-span of the project is over.

On long-term, the cultural benefit impact emerging as a result of the development of a public park changes the individual's cultural habits, contributes to the individual's getting acquainted with the rules of living together, the expected ways of behaviour, for example the rules of greeting. Similarly, in the case of spare-time sports the individual gets acquainted with the rules of the game, etc. Such effects manifest themselves not immediately but months, years or even decades later.

6. According to the geographical expansion

The cultural benefit impacts to be determined in the cost-benefit analysis may be analysed according to their geographical expansion. They may effect the population of a settlement, that of a county, the society of the entire country or may even have an impact on the global society as well (Bartus et al., 2005).

For example, a major event (sports event) organised in a settlement may significantly increase the tourism (Kálmista, 2012). However, other than tourism, it results in a number of cultural effects as well. The realisation of such an event helps the population of a settlement to get acquainted with the culture and language of other nations, it contributes to making the settlement better known and more famous. (Rátz, 1999).

Summary

The theoretical methodological questions of benefit impacts emerging in cost-benefit analysis of projects falling within the competence of public policy decisions do not form a uniform system or school of thought. In order to increase the effectiveness of the method, I have constructed a model containing the most important method-components, such as the relationship of the project and the benefit impact, the level of the manifestation, the area of the manifestation, the method of quantification, chronological manifestation and geographical expansion. This approach, among others, may conduce to make the examination more organised, more systematic. The benefit impacts may be divided into elementary methods, however, these methods are not always independent from one another. On this methodological basis, the study examines how the cultural effects of individual public policy decisions can be mapped and refers to their measurability as well.

Culture is basically a factor effectual on social level with an organising force affecting the way of thinking and the behaviour. Due to its nature, it is to be considered one of the most difficult to measure factors. The cultural effect of public policy decisions related to recreational activities, in most cases, reshapes the individuals' relationships to one another. The emerging benefit impacts influence the way of thinking, the behaviour of both the individual and community both directly and indirectly. However, only a minor part of the benefit impacts appears immediately, the rest manifests themselves months, years or decades later.

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