# Iveta Fodranová / Viera Kubičková / Anna Michalková Measuring societal value of tourism: A new approach

### Abstract

The aim of this study was the development of a tool-kit for determination of the societal value of tourism, applicable on national as well as on regional and community levels with emphasis on a deeper interaction between economic and social development and environmental protection of the country. We considered the platform of Triple-bottom-line (TBL) as a theoretical starting-point of the concept of sustainable development. For the purposes of compiling a relevant procedure we proposed to use the Leontief input–output model based on the symmetric input–output table (SIOT). The results of study has shown five key indicators, which describe economic, social and environmental phenomena, via interaction of which the value added of tourism comes to be created: the total value added created by tourism, total employment in tourism, cost savings of potential unemployment, quality of life of residents generated by tourism and environmental infrastructure of tourism, or the total value added created by tourism calculated to one resident. This indicator is constructed so that it captured not only direct but also indirect and induced effects of tourism via quantification of multiplier effects. The construction of aggregate indicators for the social and environmental areas is selected so that relevant impacts of tourism may be captured, and subsequently quantified and reflected into the final effect of tourism – into its societal value.

Key words: societal value; measuring societal impacts; sustainable development; tourism

## Introduction

Reflections on the societal value of production activity of the industry are based on the acceptance of the influence of economic activity, which represents the given industry, into separate parts of life of society. Societal value is a collective term for acknowledging the value of all outcomes. According to authors Emerson, Wachowicz and Chun (2010) societal value is value created in the way that a combination of sources, inputs, processes and policy generates a positive improvement of life of an individual or a society as a whole.

Anna Michalková, PhD, University of Economics, Faculty of Commerce, Department of Services and Tourism, Bratislava, Slovak Republic; E-mail: anna.michalkova@euba.sk



Iveta Fodranová, PhD, University of Economics, Faculty of Commerce, Department of Services and Tourism, Bratislava, Slovak Republic; E-mail: iveta.fodranova@euba.sk

Viera Kubičková, PhD, University of Economics, Faculty of Commerce, Department of Services and Tourism, Bratislava, Slovak Republic; E-mail: viera.kubickova@euba.sk

Various approaches to determining the societal value of economic activity are characteristic of common features, namely: determination of inputs of some economic activity, of its direct effects (outputs), indirect effects (outcomes) and induced effects (impacts) (Westall, 2012). The importance of defining inputs and outputs in the creation of an efficient model of societal value of the industry/economic activity lies in particular in that it enables the right selection of indicators for measuring value. Likewise in assessing the value of tourism, the objective perception of value is applied (in particular, in economic effects, or also social and economic and ecological ones) and the subjective perception of value (in particular, in social, cultural and ecological effects), while "social and environmental values are substantially more difficult to assess" (Carson, Macbeth & Jacobsen, 2005).

The assessment of impacts of tourism on the economy, society and the environment are analysed by many authors; however, exploration of their effects was going on relatively a long time in isolation, by decomposing into separate parts; in this way, synergic and cumulative effects were eliminated, which arise through the very interaction of individual subsystems. The kind of approach results in numerous works, which mostly deal only with measuring economic impacts of tourism, e.g. Archer (1977), Bieger (2002), Dwyer, Forsyth and Spurr (2003), Dwyer, Forsyth and Dwyer (2010), Frechtling (2011, 2013), Getz (2000), Gúčik (2011), Hall and Lew (2009), Chang, Khamkaew and McAleer (2010), Mayer, Müller and Woltering (2010), Stynes (2002), Vellas (2011) and many others. Problems of measuring societal impacts of tourism by means of changes in the community social climate were studied mainly by Doxey (1975), Butler (1980), Rothman (1978), Liu and Var (1986), Pearce (1989, 1998, 2003), Preister (1989), Ap (1990, 1992), Ap and Crompton (1993), Burdge (1999), Salvaris (2000), Fredline, Tideswell and Lee, (2005), Navarro, Tejada Tejada and Almeida Garcia (2012). Environmental aspects of tourism are explored in works of many authors, e.g. Mathieson and Wall (1982), Daly and Cobb (1989), Barrow (2002), Shaw and Williams (2004), Salerno, Viviano, Manfredi, Caroli, Thakun and Tartari (2013), Torres-Delgado and Saarinen (2014), Daly (2014), Costanza and Cumberland (2014), Wall and Mathieson (2006).

Starting-point sources that indicate the future direction of assessing the benefits of tourism based on a more complex assessment of its effects includes a series of works, which emphasize the implementation of non-economic effects of tourism (social and environmental effects) in connection with asserting the conception of permanently sustainable tourism, as e.g. the NAVCA model (NAVCA's Local Commissioning and Procurement Unit, Westall, 2012), PSR model (OECD, 1993), or DPSIR (EEA, 1999). Although the models were not originally developed for the area of tourism and measuring societal value, they were applied also to tourism (NAVCA model, 2012, model DPSIR, 2006). The capacity utilization model (CUM), focuses mainly on economic issues; this model quantifies the economic impact (labour and fiscal) that tourism has on the local economy and estimates 'payroll'. Regional Economic Models, Inc (REMI) estimates 'disposable personal income'. It has much in common with the computable general equilibrium (CGE) models. It does, however, differ from the CGE models in that the REMI model does not require markets to clear continuously. The impact analysis for planning, or IMPLAN, model, in contrast to REMI, is solely an I/O model and estimates 'value added' (Bonn, Harrington, 2008).



# Methodology

The basis of methodology of the present paper is the quantification of benefits of tourism in a territory by means of selected approach to indicators in economic, social and environmental areas, quantifying various aspects of human activities and activities in their direct and indirect manifestations. We will consider the platform of Triple-bottom-line (TBL) by Elkington (1997) as a theoretical starting-point of the concept of sustainable development, which is defined by three integrated elements – natural resource stewardship, economic vitality, and community well-being.

Effectiveness and applicability of the proposed methodology in decision-making processes of tourism strategic management and the setting-up of tools of tourism development determine the number of indicators. From a wide range of possible complex of indicators for paticular areas, there are five key indicators proposed in the present paper. The selection and construction of proposed key indicators of measuring the societal value of tourism were chosen in particular with respect to enable us to express in the most to express in the most proposed way the societal value of tourism, relevance of monitored economic phenomenon in connection with the creation of societal value of tourism, availability of data on national level, or at lower territorial levels and the possibility of quantifying the benefit of the monitored economic phenomenon.

We consider the starting-point of quantifying the societal value of tourism in defining its economic value. In view of their relevance when expressing individual aspects of economic value of tourism, the following indicators were selected from the complex of possible indicators that express partial values of tourism: indicator of the total value added created by tourism, total employment in tourism, and cost saving for potential unemployment.

The starting-point of quantification of the total economic benefits of the development of tourism, i.e. direct, indirect and induced benefits on the national level, is defining multipliers, which enable their calculation. For the purposes of compiling a relevant procedurewe propose to use the Leontief input–output model based on the symmetric input–output table (SIOT). This model is a tool of for the calculation of secondary effects resulting from mutual links between individual processes and services captured in tables of deliveries and use.

With respect to the topic under study the selected set of indicators in economic area of measuring the social value of tourism we can recommend the quantification of mainly multiplier of value added and the multiplier of employment. The value added multiplier with induced effect represents the value added which is generated in the economy by one unit of the final consumption of monitored commodity, i. e. the impact of change in the volume of final consumption of tourism on the total value added in the economy. Multiplier of employment with induced effect is a coefficient expressing the total number of jobs generated directly, indirectly and in an induced way by the final demand for production of a given industry. Indirect benefits are expressed by a simple indicator and the expression of total benefits is made possible by the multiplier with induced effect.

For the purposes of expressing tourism multipliers, we recommend to work as with the starting data of internal consumption of tourism, which is provided by the Tourism Satellite Account. This value has to be calculated from the buyers'prices to basic prices for the purpose of its use in SIOT. The application of data on the consumption of internal tourism reflects the production of tourism industries, which was consumed for the purposes of satisfying the demands for tourism services.



The application of these procedures enables to identify also the third key indicator proposed – cost saving for potential unemployment via expressing the total employment in tourism, i.e. direct, indirect and induced ones.

Elkington (2004, p. 3) describes the triple bottom line as "an inevitable expansion of environmental agenda" that "focuses corporations not just economic value that they add, but also on environmental & social value they add or destroy". Even with the benefit of hindsight, however, can we state that in comparison with the economic and environmental dimensions, the social dimension of sustainable development and its relations and links to economic and environmental dimension is the least elaborated. The main reason remains the complex nature of societal phenomena, which introduce a considerable rate of subjectivity as early as they are being identified, and this subjective nature is rising in the course of their subsequent evaluation in geometric series. The next problem is also a permanent monitoring of the given phenomena on national and local levels and their subsequent quantification, since TBL platform has no universal unit applicable to all the three subsystems. In terms of quantifying benefits, definitely the easiest would be the monetary quantification, however, that one is rather problematic in environmental and social areas. Some solution could be seen in the application of index methods, then again, the weight of components again poses a problem here, and it could in the end lead to comparing the weight of not only individual components but into that of entire subsystems. In view of these problems, the most suitable is a combination of several methods, according to Slaper and Hall (2011) "the trick isn't defining the triple bottom line. The trick is measuring it." Since so far there is no universally accepted method for calculating triple bottom line impacts, so practitioners, researchers, and evaluators must develop indicators that are adapted to the needs of specific groups.

Respecting requirements of specific groups'needs in the selection of social indicators, however, means to observe the links between economic and societal development. According to Salvaris (2000) the key role here is played by new local participatory approaches; emphasis on social inclusion; holistic 'community health' approach; building meaningful and cooperative governance tasks that build social trust andstrong communities; creating increasingly open and democratic processes and forums, greater accountability, and extending opportunities for citizen participation.

Within the social area, the present paper contains the proposal for aggregate indicator of the quality residents' life generated by tourism, which indicates the perception of impacts of tourism on residents. The societal value of tourism in terms of the environment area is determined by indicators of tourism environmental infrastructure. The specificity of social and environmental indicators rests in their pressure on economic indicators, which means that under a suitable form and intensity of tourism they are becoming a favourable accelerator of tourism value added growth and of other economic indicators; and vice versa, if under erroneously set parameters of tourism via the social pressure the community social structure is destructed, they bring in an undesirable acculturation, cause the deformation of residents'attitudes and values. An unmanaged, unrestrained tourism affects in a similarly the natural environment in a similarly destructive way. If the environmental infrastructure and following up activities and services do not correlate with adequate formats of tourism, the natural and anthropogenic environments are degraded.



# **Results and discussion**

Based on the methodology described, there are proposed key indicators of measuring the societal value of tourism, while each of the indicators recommended is supplemented with the possibility of relevant modifications to a selected indicator and the set of supplementary indicators, which are able to render a more precise quantification of the societal value of tourism according to personnel, time and financial possibilities of a territorial unit management.

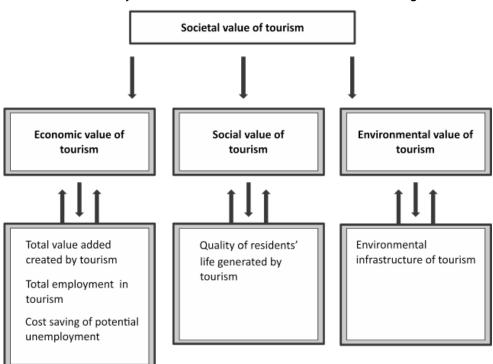


Figure 1 Construction of the system of societal value of tourism and determining indicators

Source: own processing, 2015.

In the entire process of quantification of the societal value of tourism and in the calculation of individual indicators various simplifications are assumed, the aim of which is to achieve their accessibility and real use in the practice of tourism on various territorial levels. The rate and character of these simplifications, selection of procedures mentioned and of their specification depends on a set of various factors, namely on specific features of a territorial unit, i.e. its territorial level. The total value added created by tourism is the product of direct, indirect and induced value. In the calculation, it is the product of internal consumption of tourism and the multiplier of value added with induced effect. It is the value added created in enterprises of tourism industries called forth by the internal consumption of tourism, the value added corresponding to the production of subdeliveries in the production of products of tourism and increased by the value added corresponding to the production that was brought about by the final consumption of tourism employee wages. Therefore:



 $VA_T = C_T \times m_{VAi}$ Key:  $VA_T$  – total value added created by tourism  $C_T$  – internal consumption of tourism  $m_{VAi}$  – multiplier of value added with induced effect

The total employment in tourism is a sum of direct, and indirect and induced employment. In the calculation, it is a product of internal consumption of tourism and a multiplier of employment with induced effect. The number of jobs calculated to a full working day/period expresses the total employment in tourism. The indicator expresses the number of jobs that create in total 1 mil. Eur of final demand for the production of tourism expressed in the internal consumption in tourism. It is the employment in tourism industries (direct employment), in sellers' industries (indirect employment called forth by intermediary production) and employment resulting from the production caused by the final consumption of wages of tourism employees (induced employment). Therefore:

 $E_{T} = C_{T} \times m_{Ei}$ Key:

 $\boldsymbol{E}_{\rm T}-$  total number of jobs created by tourism

 $C_{_{\rm T}}$  – internal consumption of tourism

 $m_{_{\mathrm{Ti}}}$  – multiplier of employment with induced effect

The value of cost savings of public budget for a potential unemployment proposed as the third indicator for the economic area is represented by the total employment generated by the internal consumption of tourism. It is derived from average costs on one unemployed person and from the total employment in tourism. (For the purposes of approximate quantification of costs connected with unemployed population, we recommend to include the calculation of unemployment benefits). Next item is incomes that public budgets are losing in the case of an unemployed person because of default payments into public funds (health, sickness and old age insurance, employment fund, etc.) and income tax. That has to also include also losses of purchasing power of this population. The quantification of the value of cost savings of public budget for the potential unemployment represented by the total employment generated by internal consumption of tourism is expressed by the following formula:

 $CS_{_{PB}} = C_{_{II}} \times E_{_{T}}$ 

Key:

 $CS_{_{PB}}$  – saving of the public budget for potential unemployment generated by employment in tourism

 $C_{II}$  – average costs on one unemployed during a period monitored

 $E_{_{\rm T}}$  – total number of jobs in tourism

The following table contains indicators of economic value as a part of the societal value of tourism, including proposed modified indicators and supplementary indicators.



Original scientific paper Iveta Fodranová / Viera Kubičková / Anna Michalková Vol. 63/ No. 4/ 2015/ 423 - 434

Total value add	ded created by tourism
Description	Sum of direct*, indirect and induced value added**. It is calculated as multiplication of internal consumption of tourism and multiplier of value added with induced effect.
Aim	Expresses economic benefit of tourism production.
Applicability	National, regional, local levels.
Modifications of indicator	1. Direct gross value added in tourism.
	2. Indirect value added in tourism.
	3. Induced value added in tourism.
Supple- mentary	1. Share of gross value added created by tourism on the total gross value added in the economy
	2. Value added created in characteristic industries of tourism per 1 inhabitant.
	3. Value added created in characteristic industries of tourism per 1 employee.
indicators	4. Share of total value added in tourism on the total employment in tourism.
	5. Total value added in tourism per 1 inhabitant.
Total employm	ient in tourism
Description	Sum of direct*, indirect and induced employment***. It is calculated as multiplication of internal tourism consumption and employment multiplier with induced effect.
Aim	Expresses the economic benefit of tourism production.
Applicability	National, regional, local levels.
	1. Direct employment in tourism.
Modifications	2. Indirect employment in tourism.
of indicator	3. Induced employment in tourism.
ormaleator	4. Share of total employment in tourism per 1 job directly in tourism.
	5. Share of total employment in tourism per 1 resident.
	1. Share of total employment in tourism on the total employment in the economy.
	<ol> <li>Rate of employment in tourism, i.e. the share of the employees in tourism aged from 20 to 64 years per 1 inhabitant aged from 20 to 64 years****.</li> </ol>
Supple-	3. Total value added in tourism per 1 employee in tourism.
mentary indicators	4. Contribution of employment in tourism to decreasing unemployment in a territorial unit. It is a share of newly created jobs in tourism (difference between the employment in tourism in the year monitored and the employment in tourism in a base year) and the number of unem- ployed in a territorial unit in the period monitored, expressed in percentage.
	5. Total employment in tourism per one bed.
	6. Total employment in tourism per one-night stay.
Cost saving for	r potential unemployment
Description	Indicator expresses the cost saving of public budget sources, which would arise if tourism did not create jobs directly, indirectly or in an induced way. It assumes a state, when the number of jobs (total employment in tourism) was not created and the labour force would thus be in the position of an unemployed labour force.
Aim	Expresses economic benefit of tourism production.
Applicability	National, regional, local levels.
Modifications of indicator	1. Cost saving on potential unemployment represented by direct employment in tourism.
	2. Cost saving on potential unemployment represented by indirect employment in tourism.
	3. Cost saving on potential unemployment represented by induced employment in tourism.

Table 1 Description and utilisation of indicators of economic value of tourism

\*Calculation of direct effects of tourism is part of the methodology of the Tourism Satellite Account, which provides results for separate tourism industries.

\*\*The value of the Simple input–output multiplier VA in the Slovak Republic is 0.7985; that of the multiplier with induced effect is 1.1976. Source: own calculations based on SIOT 2010, Statistical Office of the Slovak Republic, processed with MATLAB program, 2014. \*\*\*The value of the Simple input–output employment multiplier in the Slovak Republic is 43.922, multiplier with the induced effect of 57.1734. Source: own calculations based on SIOT 2010, Statistical Office of the Slovak Republic, processed with MATLAB program, 2014.

\*\*\*\*The indicator is adjusted to methodology of statistical investigation of labour force.



Original scientific paper Iveta Fodranová / Viera Kubičková / Anna Michalková Vol. 63/ No. 4/ 2015/ 423 - 434 The aim of societal indicators is to quantify the social subsystem of the concept of permanently sustainable development through community as a carrier of social capital, which is expressed, as Švihlová (2006) states, in principle by how persons, individually or collectively, decide and behave in relation to where they live, e.g. to the region, and what responsibility they feel for the world as a whole. The author further states that in principle, the concept of permanently sustainable community has not a unanimous answer applicable to each community, municipality, city or region. Community activities in achieving the permanent sustainability will differ according to local conditions. However, a common feature is a continuous effort for satisfying social and economic needs of inhabitants with the simultaneous protection of the environment so that satisfying needs of future generations were not endangered.

The theoretical starting-point for the quantification of impacts of tourism on the quality of residents' life in the destination is the measuring of satisfaction of a resident in four dimensions, which describe material comfort, community comfort, emotional comfort, and health and safety. The Irritation Index (Doxey, 1975) was selected as the key indicator; this indicator also developed to measure community responses to a destination's lifecycle. This can also be overlaid with Butler's model (Butler, 1980) to determine community irritation at specific destination stages. Both the Doxey (Irridex) and Butler (Destination Life Cycle) models assume a degree of homogeneity and uni-directionality in community reactions which hasbeen questioned. For a particular determination of the value of given indicators it is possible to use the Likert five-point scale, subsequently determine hypotheses, which can be tested by means of current statistic methods.

# Table 2Description and usage of tourism social value indicators

Quality of residents' life generated by tourism		
Description	The Doxey irritation index illustrates the interactions between tourists and residents, which may result in various irritation degrees (hostility). Measuring a resident's satisfaction in four dimensions, which describe material comfort, community comfort, emotional comfort, and health and safety.	
Aim	Determination of the level of resident satisfaction with the effects of tourism on the community via identification of tourism's social pressure on residents, which evokes the change in norms, standards and social structure of the community.	
Applicability	Regional and local levels.	
Indicator modifications	Possible application of the Butler model, which assumes the simultaneous course of negative and positive residents'attitudes.	
Supplementary indicators	<ol> <li>Measuring residents'material comfort.</li> <li>Community comfort of residents.</li> <li>Emotional comfort of residents.</li> <li>Health and safety of residents.</li> </ol>	

Likewise each economic activity, also tourism demonstrates the correlation with the need for environmental protection all the more that it needs also environmental goods and services for its activities. If we define the environmental value as the value that a community or society places on environmental goods or services such as aesthetic and recreational facilities and resources (according to The Law Dictionary Featuring Black's Law Dictionary), then the economic value created by tourism must be integrated into the environmental value. The proposed system of environmental indicators represents a mutually interlinked system of indicators, which indicates the drawing of and sources with respect



to the needs of regeneration and renewal of the territory resulting from tourism activities. Indicators are determined on a monetary basis; however, the problem that remains is to differentiate impacts of tourism from other economic activities, as well as the determination of the value of non-market environmental goods. The key indicator of the environmental subsystem named *Environmental Tour-ism Infrastructure* enables to monitor a comprehensive system of environmentally suitable forms of the usage of the environment for all the entities participating in tourism that respect the principles of permanently sustainable development of a territorial unit.

#### Table 3

Environmental infrastructure of tourism		
Description	Indicator quantifies the volume of financial funds invested in the environmental infrastructure in connection with tourism with the intention to preserve, protect or renew individual components of the environment and its ecosystems in calculation per one resident. It expresses the contribution of tourism to an active creation of the environment.	
Aim	Monitor a complex system of environmentally suitable forms of the usage of the environment for all the entities participating in tourism who respect principles of permanently sustainable development of a territorial unit.	
Usability	National, regional and local levels.	
Indicator modifications	<ol> <li>Volume of financial funds from public sources invested for preservation, protection and restoration of the environment of a territorial unit acquired from foreign sources per 1 resident.</li> <li>Share of the volume of financial funds from public sources invested for preservation, protection and restoration of the environment of a territorial unit on the total invested sources.</li> <li>The volume of financial resources (from public and private sources) invested for preservation, protection and restoration of the environment of a territorial unit acquired from foreign sources per one resident.</li> </ol>	
Supplementary indicators	<ol> <li>Environmental effectiveness of tourism in view of the interventions into nature and landscape.</li> <li>Environmental certification of services and products made by tourism producers.</li> <li>Visual and noise pollution as a result of tourism.</li> </ol>	

#### Description and usage of indicators of tourism environmental value

### Conclusion

The areas for which the societal value of tourism is monitored have various positions in the process of mediating this societal value. We can start from the assumption that any activity in the area of tourism will be reflected either directly or secondarily, sooner or later in individual indicators of economic area, which will, in effect, project into the value of the indicator of the total value added created by tourism. The value added created by tourism in this sense is understood as a key expression of the societal value of tourism, which generates both positive and negative effects of the development of tourism in the territorial unit. We recommend the reporting of the share indicator of value added, namely the total value added created by tourism per 1 resident. An indicator constructed in this way has a higher information value, it can be used for comparison analyses of various territorial units, and it at the same time reflects the connections with demographical development of population in the territory.



Original scientific paper Iveta Fodranová / Viera Kubičková / Anna Michalková Vol. 63/ No. 4/ 2015/ 423 - 434 Reporting the indicators proposed for the social and environmental areas is essential in particular for a systematic monitoring of the adequately setting-up of tourism activities held in the living environment and consume sources in all its components. These indicators are expected to assist in decisionmaking processes of economic entities in the course of implementation of tourism development and of its favourable effects and avoiding, minimising, or eliminating its negative effects in the social and environmental areas. They constitute the basis of decision making and executive activities of public bodies and enterprise entities for the implementation of ethical and responsible approach to sustainable tourism and sustainable development of the region, and for this reason have to be an integral part of all the planning processes.

The reporting of indicators proposed relates to, in terms of time, the period of one year, or a season. Their monitoring is ideally annual, or if possible, the periodicity of reporting is determined by the management of tourism according to their possibilities. It is possible to recommend to hold investigation mainly during the decision-making process on the tools of state, regional and communal policy, in particular in economic, social and environmental and other areas, as well as in the process of evaluating influences of the implementation of these tools after significant changes in the micro- and macro-environment of tourism of the territorial unit concerned.

## Limitation and future research directions

The quantification of tourism benefits remains to be the subject of interest to policy makers and planners, to private businesses, governmental and public agencies, and to the local communities. The aim of this study was the construction of methodology for determining the societal value of tourism, applicable on national as well as on regional and community levels with emphasis on a deeper interaction between economic and social development and environmental protection of the country. Limits of applicability of the proposed methodology result from constraints of the input–output method, subjective nature of indicators quantifying the socio-cultural, psychological and environmental impacts of tourism on the community and inadequate transparency of financial flows directed mainly to the sanation of environmental damage as a result of using environment for tourism needs. Further development of research into this problem area should definitely be directed to developing an effective database for the purpose of data collection so that the sources of effects and impacts in economic, social and environmental areas evoked by tourism could be unanimously identified and selected.

# References

- Ap, J. & Crompton, J. L. (1993). Residents 'strategies for responding to tourism impacts. *Journal of Travel Research*, 32(1), 47–50.
- Ap, J. (1990). Residents' perceptions research on the social impacts of tourism. *Annals of Tourism Research*, 17(4), 610–616.
- Ap, J. (1992). Residents' perceptions on tourism impacts. Annals of Tourism Research, 19(4), 665–90.
- Archer, B. (1977). Tourism Multipliers: The State of the Art. Wales: University of Wales Press.
- Barrow, C. (2002). Evaluating the social impacts of environmental and the environmental impacts of social change: An introductory review of social impact assessment. *Environmental Studies*, *59*(2), 185-195.



Bieger, T. (2004). Tourismuslehre – Ein Grundriss. Bern: Haupt Verlag.

- Bonn, M. & Harrington, J. (2008). A comparison of three economic impact models for applied hospitality and tourism research. *Tourism Economics*, 14(4), 769–789.
- Burdge, R. (1999). A Community Guide to Social Impact Assessment (Revised edn.). Middleton, Wisconsin: Social Ecology Press.
- Butler, R. W. (1975). Tourism as an agent of social change. *Proceedings of the International Geographical Union's Work*ing Group on the Geography of Tourism and Recreation (pp. 85-90). Peterborough, Ontario: Trent University.
- Butler, R. W. (1980). The concept of a tourist area cycle of evolution: Implication for management of resources. *The Canadian Geographer*, 2(1), 5-12.
- Carson, D., Macbeth, J. & Jacobsen, D. (2005). An evaluation of tourism's contribution to regional economies. CRC for Sustainable Tourism.
- Chang, C. L., Khamkaew, T. & McAleer, M. (2010). Estimation of a Panel Thereshold Model of Tourism Specialization and Economic Development. *CIRJE Disussion Papers*. Retrieved from http://scribd.com.
- Daly, H. & Cobb, J. (1989). For the common goodRedirecting the Economy Toward Community, the Environment, and a Sustainable Future By Herman Daly and John Cobb Jr. Boston: Beacon Press.
- Daly, H. E. (2014). Beyond Growth: The Economics of Sustainable Development. Beacon Press.
- Doxey, G. V. (1975). A causation theory of visitor-resident irritants: Methodology and research inferences. *Travel and Tourism Research Associations Sixth Annual Conference Proceedings* (pp. 195–98). San Diego.
- Dwyer, L., Forsyth, P. & Dwyer, W. (2010). Tourism economics and policy. Gloucestershire: Channel View Publications.
- Dwyer, L., Forsyth, P. & Spurr, R. (2003). Inter-industry effects of tourism growth: Implications for destination managers. *Tourism Economics*, 9(2), 117-132.
- Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business. Capstone Publishing Ltd.
- Elkington, J. (2004). Enter the Triple Bottom Line. In A. Henriques & J. Richardson (Eds.), *The Triple Bottom Line: Does it All Add Up? Assessing the Sustainability of Business and CSR*. London: Earthscan Publications.
- Emerson, J., Wachowicz, J. & Chun, S. (2010). Social return on investment. Exploring aspects of value creation in the non-profir sector. REDF Publications.
- European Environment Agency. (1999), Environmental indicators: Typology and overview EEA. Retrieved from http:// www.eea.europa.eu/publications.
- European Environmental Agency. (1999). Environmental indicators: Typology and overview. *Technical report No 25*. Copenhagen.
- Frechtling, D. C. (2011). *Exploring the Full Economic Impact of Tourism for Policy Making*. Madrid: UNWTO. Retrieved from http://statistics.unwto.org/content/papers.
- Frechtling, D. C. (2013). *The economic impact of tourism. Overview and examples of macroeconomic analysis.* Madrid: UNWTO. Retrieved from http://statistics.unwto.org/content/papers.
- Fredline, E., Tideswell, C. & Lee, D. (2005). Community Awareness of Tourism in Byron Bay, report for Sustainable Tourism CRC. Gold Coast, Australia.
- Getz, D. (2000). Trends in Outdoor Recreation, Leisure and Tourism. CABI Publishing.
- Gúčik, M. (2011). Cestovný ruch. *Politika a ekonómia*. Banská Bystrica: Slovensko-švajčiarske združenie pre rozvoj cestovného ruchu.
- Hall, C. M. & Lew, A. (2009). Understanding and managing tourism impacts: an integrated approach. New York: Routledge.
- Liu, J. C. & Var, T. (1986) Resident attitudes towards tourism impacts in Hawaii. Annals of Tourism Research, 13, 193–214.



Mathieson, A. & Wall, G. (1982). Tourism: Economic, Physical and Social Impacts. London: Longman.

- Mayer, M., Müller, M. & Woltering, M. (2010). The economic impact of tourism in six German national parks. *Landscape and Urban Planning*. Retrivied from https://www.alexandria.unisg.ch.
- Navarro Jurado E., Tejada Tejada, M. & Almeida Garcia, F. (2012). Carrying capacity assessment for tourist destinations. Methodology for thecreation of synthetic indicators applied in a coastal area. *Tourism Management 33*.
- OECD. (1993). Core set of indicators for environmental performance reviews. a synthesis report by the groupon the state of the environment. Paris: Environment monographs, N° 83.
- Pearce, D. (1989). Social impacts of tourism. In *Social Cultural and Environmental Impacts of Tourism*. Sydney: NSW Tourism Commission.
- Pearce, D. (1989). *Tourist Development* (2<sup>nd</sup> ed.). London: Longman.
- Pearce, P. (1998). The relationship between residents and tourists: the research literature and management directions. In W. Theobald (ed.), *Global Tourism* (pp. 129-149). Oxford: Butterworth-Heinemann.
- Rothman, R. (1978). Residents and transients: Community reaction to seasonal visitors. *Journal of Travel Research* 16, 8–13.
- Salerno, F., Viviano, G., Manfredi, E. C., Caroli, P., Thakun, S. & Tartari, G. (2013). Multiple Carrying Capacities from a management-oriented perspective to operationalize sustainable tourism in protected areas. *Journal of Envi*ronmental Management, 128, 116 – 125.
- Salvaris, M. (2000). Community and Social Indicators: How Citizens can Measure Progress. Hawthorn: Victoria Institute for Social Research. Institute for Social Research. Swinburne University of Technology. Retrivied from http://library.bsl.org.au.
- Shaw, G. & Williams, A. M. (2004). Tourism and Tourism Spaces. London: SAGE.
- Slaper, T. F & Hall, T. J. (2011). The Triple Bottom Line: What is it and How does it Work? Indiana Business Review, 86(1).
- Stynes, D. J. (2002). *Economic Impacts of Tourism*. Michigan: Michigan State University. Retrieved from https://www. msu.edu/course/prr/840/econimpact/pdf/ecimpvol1.pdf.
- . Švihlová, D. (2006). Postavenie komunít v trvalo udržateľnom rozvoji. *Národohospodářský obzor* 2
- Torres-Delgado, A. & Saarinen, J. (2014). Using indicators to assess sustainable tourism development: a review. *Tour-ism Geographies*, 16, 31 47.
- Tourism Satellite Account. (2008). *Recommended methodological framework (TSA: RMF 2008*). Eurostat. Retrieved from http://unstats.un.org/unsd/statcom/doc08/BG-TSA.pdf.
- Vellas, F. (2011). *The indirect impact of tourism: An economic analysis*. UNWTO. Retrieved from http://dtxtq4w60xqpw. cloud.
- Wall, G. & Mathieson, A. (2006). Tourism: Change, Impacts and Opportunities. New York: Pearson & Prentice Hall.
- Westall, A. (2012). Measuring social value, social outcomes and impact. *NAVCA 2012*. Retrieved from http://www. siaassociation.org/wp-content/uploads/2012/05/NAVCA-report-on-measuring-social-value-social-outcomes-and-impact.pdf.

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