



The SAGE International Encyclopedia of Travel and Tourism

Externalities

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Externalities are the unintended impacts of one economic activity on another activity or on people's well-being. These impacts can be positive or negative. The travel and tourism industry causes positive externalities as it increases the efficiency of other industries and stimulates investment in infrastructure and in activities that benefit local residents and businesses. The industry also has negative externalities, including the effects of transportation and other activities on the local and global environment, the disruption of local communities, and the increase in road accidents and congestion in the use of space, facilities, and transportation systems. The application of public policies to correct externalities, using economic instruments such as taxes and charges, is technically complex and often lacks public support.

Concept

The concept of externalities is used in economics to describe the impacts of the production or consumption of a good or service on the production or consumption of another good or service. The concept was first introduced by Henry Sidgwick and Alfred Marshall in the 19th century and was developed in more detail by Arthur Pigou in his book *The Economics of Welfare*, published in 1920. Externalities arise due to market failures, when market prices do not reflect the full benefits and costs of an activity for society as a whole. This results in an inefficient outcome, as the level of that activity is either higher or lower than the social optimum. Negative externalities also have equity aspects, as in most cases the part bearing the external cost is not the same part deriving the benefits from the activity.

The correction of negative externalities can be achieved by applying taxes on the activity producing the externality equal to the value of the externality. These taxes are known as "Pigouvian" taxes. In theory, these taxes increase the costs of the activity and lead to a reduction of its level. Conversely, the provision of subsidies for activities producing positive externalities increases the benefits of the activity and lead to an increase of their level. An alternative solution was proposed in 1960 by Ronald Coase, who proved that in the absence of substantial transaction costs, the social optimum level for an activity causing externalities can be reached through negotiation between the part causing the externality and the part affected by it.

Positive Externalities

In general, the development of tourism has positive effects on the local economy, as the expenditure in the hospitality, transportation, and entertainment sectors helps to create jobs and generate income. In addition, the construction and renovation of infrastructure linked to the travel and tourism industry stimulate the construction industry. Tourism also contributes to the improvement of the image of a place and to the dissemination of information about that place, which are important factors in attracting investment to other sectors of the local economy.

Tourism also promotes investment in the transportation infrastructure, including airports, roads, and public transportation systems, and the application of policies to improve existing transportation services. The increase in the accessibility of a place has positive effects as it facilitates the flow of goods, people, capital, and knowledge, increasing the efficiency of the local economy and their competitiveness in the global market. The improvement of the local public transportation also brings benefits to local residents. This is especially the case in rural

areas, where local demand may be insufficient to ensure that the system is profitable. In many cases, tourism demand also allows the system to operate a regular schedule on weekends and at off-peak times. In this sense, tourists “cross-subsidize” the regular users of the system. In addition, the need to provide tourists with clear and updated information leads to improvements that also benefit local users.

The development of tourism may also be the catalyst for urban policies such as the regeneration of run-down areas and improvement of the urban environment, with potential positive impacts on the quality of life of local residents. In addition, new facilities and services may be created, for the use of tourists as well as local residents, such as shopping areas, cultural institutions, bars and restaurants, and facilities for the practice of sports and other leisure activities.

Rural tourism and agriculture may also benefit from each other. Tourism provides funding for agricultural activity and increases its efficiency, as it allows for economies of scale and for a more rational use of resources in the economy of villages and farms. Tourists also represent a market for agricultural products. Agricultural activity benefits tourism for the same economic efficiency reasons and because it contributes to the rural atmosphere that some visitors expect.

The development of tourism may also create the conditions for the implementation of policies for environmental conservation and preservation of areas with natural, historical, or cultural value. The revenue from tourist access to these areas provides the funding for their protection and maintenance. The fact that environmental quality and “sense of place” promote the development of tourism also provides a strong argument for the introduction of policies that otherwise would have little social and political support.

Negative Externalities

Environment

Travel and tourism cause a series of negative environmental impacts. Most of these impacts are related to the use of fossil fuels in transportation. Cars, buses, trains, ships, and airplanes cause air pollution due to the emission of noxious gases such as carbon monoxide, nitrous oxides, and sulfur oxides and to the formation of particulate matter, volatile organic compounds, and ground-level ozone (also known as smog). Atmospheric concentrations of some of these pollutants also contribute to the formation of acid rain, which has impacts on human and nonhuman life over a wide region.

The travel and tourism industry is also responsible for the emission of global greenhouse gases such as carbon dioxide. Once again, transportation accounts for the largest share of emissions of the industry. The rise in air travel, cruise ship holidays, and use of private vehicles has led to a continuous increase in emissions during the last decades. There is evidence that the increase in the concentration of greenhouse gases is leading to climate changes such as global warming and increase in extreme weather conditions. The effects will be particularly severe in developing countries due to their geographic location and the lack of resources for adaptation.

Water pollution is another negative environmental externality of the travel and tourism industry. The dredging of waterways to facilitate the navigation of large ships has impacts on the aquatic ecosystem. Cruise ship travel also produces large quantities of sewage, grey

water, and solid waste, which may be harmful for aquatic life and, if discharged close to the shore, also to human health. Materials such as dirt, dust, engine oil, rubber, and metal washed off from airports, roads, and construction sites may also be carried to water bodies.

The presence of large numbers of tourists may also lead to the degradation of environmentally sensitive areas such as wetlands, flood plains, and coastal areas. The construction of structures to accommodate tourism facilities and the tendency to the increase of volumes of traffic of people and vehicles disrupts wildlife and reduces biodiversity in these areas.

In many cases, the environmental externalities of travel and tourism that cause the most concern are those that local residents can see and hear. Tourism activities often generate litter, especially in the case of major events. The residents of neighborhoods near transport links and terminals, major tourist attractions, and nightlife areas also tend to be exposed to high levels of noise and vibration, which has potential consequences in terms of health and well-being.

Society

Tourism may also have unintended negative consequences on the local society. It is argued that tourism changes or even destroys local culture. In particular, the establishment of large multinational businesses to provide services to tourists contributes to the loss of the identity of small towns. In many cases, tourism also increases local economic and social inequality as only some groups are able to derive benefit from the tourism industry. Peripheral areas, far from the main attractions, may not derive any direct or indirect benefits. Tourism may also lead to an increase of prices due to the increase in demand for some goods and services or cause distortion in local prices because visitors often have higher ability to pay than local people.

Evidence has also shown that the presence of tourists has an impact on levels of crime. This may be because tourists are perceived as more vulnerable or because tourists increase the demand for illegal goods and services such as drugs and prostitution, which are usually provided by organized criminal groups.

Large transportation and tourism infrastructures also fragment the built-up environment, in some cases separating local communities, an effect identified in the literature as “community severance” or “barrier effect,” with impacts on local walking mobility and accessibility and ultimately on public health and social networks.

Road accidents are another externality linked with the travel and tourism industry. There is empirical evidence that the increase in the number of tourists is linked to the increase in the number of accidents during the peak tourism period in some places. Besides the loss of human life and health, traffic accidents have a series of economic consequences such as property damages, medical and emergency service costs, and lost productivity.

Space

The construction of large infrastructures such as airports, roads and railway lines, hotels, and resorts consumes land, reducing the area available for other land uses, such as open land and forests, and economic activities, such as agriculture and manufacturing. In some occasions, local residents may be expropriated from the land used by the new infrastructure. In addition, the development of tourism is often associated with urbanization and overbuilding,

and changes in street layout. These changes may have a negative impact on the life of local residents and on local businesses.

The use of space by tourists may also cause externalities on other users of space. This is especially the case of small cities, islands, and destinations where there is a high seasonality in tourism. Some destinations have seen a very rapid increase in the number of visitors, stretching the capacity of local infrastructure. The number of visitors using public spaces and public and private services and facilities during the high season may cause time losses and stress to local residents.

Tourism transportation may also increase congestion in the local transportation system, especially in the road network, with effects on users of both private and public transportation. In some tourist destinations, the increase in the use of rental cars during the peak tourist season leads to serious problems of road congestion. Changes to the road network to promote walking access for tourists to city centers and historical areas may aggravate this problem, although these changes also can enhance street life and improve the accessibility of local residents who have mobility restrictions. Tourism activities also create a pressure on car parking spaces, especially in areas where this space is already limited, such as city centers and historical areas.

Congestion leads to time losses, increases in energy consumption, and aggravation of air pollution, with effects in many sectors of the local economy. It also causes delays for tourists and affects their satisfaction with the trip. In the long term, it may damage the image of the place and reduce its competitiveness in the tourism market.

Congestion may also occur in rural areas and natural areas, due to their limited capacity to accommodate a large number of visitors. The increase in the demand for visiting natural parks and places with cultural significance decreases the potential for local residents to use these areas for leisure and recreation, as charges or access restrictions need to be introduced.

Public Policies

The type of solutions to externalities proposed by Pigou has been frequently applied to reduce the negative effects of the transportation sector. Two common solutions are the introduction of fuel taxes and the imposition of a charge for the use of vehicles on certain roads at certain times. The aim of these policies is to bring the level of traffic in tune with the external costs in terms of congestion and environmental degradation.

Congestion pricing schemes have been introduced in a number of cities. The Singapore Area Licensing Scheme was implemented in 1976 and has since been upgraded to the Electronic Road Pricing Scheme. Some European cities have introduced similar schemes, including large metropolises such as London and Milan and small towns in several countries. The implementation of these schemes is operationally complex and is often subject to social and political opposition. These problems are part of the reason why road pricing schemes have been rejected in some cities (such as New York) or have been discontinued in others (such as Hong Kong). Alternative policies to tackle congestion problems related to tourism transportation include the promotion of public transportation or nonmotorized modes and the introduction of taxes on the use of rental cars and charges on the use of car parking areas or on the entrance to some parts of the city.

The introduction of taxes and charges is also a possible solution for the reduction of the level

of other tourism activities causing negative externalities, such as recreation activities causing air and water pollution, the operation of bars and restaurants in residential areas, and the access to areas with cultural and environmental significance.

The application of policies to correct externalities is often hindered by the lack of knowledge about their economic value. Without comparing the value of the external and internal benefits and costs, it is impossible to estimate the optimum value of the tax or subsidy that should be applied. As the external effects are not traded in the markets, it is necessary to apply methods of economic valuation based on estimates of people's willingness to pay or accept for additional units of the effect. There is a large literature measuring the unit costs of the environmental impacts of transportation, but little evidence about the value of other external effects of the travel and tourism industry, such as the impacts on local society and culture.

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See also [Cost-Benefit Analysis](#); [Economics of Tourism](#); [Environmental Impacts of Tourism](#); [Sociocultural Issues Related to Tourism](#); [Tourism Multiplier](#)

Further Readings

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