

DESIGNING AN ACCESSIBLE TOURISM DESTINATION: THE SOFT SYSTEM METHODOLOGY AND THE TRIPLE HELIX AS A THEORETICAL AND PRACTICAL PROPOSAL

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ABSTRACT

Accesible tourism has its origin in the 90's, at the beginning it was proposed as part of the Social Tourism or Tourism for All programs that had their basis in the human rights. Later, with the changes in the paradigms about people with disabilities accessible tourism has not only become a matter of human rights but also an opportunity to develop business that satisfy a growing population of people with disabilities and older people that acquires one or more types of disabilities.

Demographic factors such as the increasing in life expectancy, better health care and retirement of people increase the needs of designing and building products and services that satisfy this demand. The Soft System Methodology, developed by Peter Checkland consider social factors and complex relations in tourism, its 7 phases allow the researcher to compare and simulate different scenarios that brings to the most viable practice, it brings an approximation to a model of accessible tourism, gathering elements such as research, infrastructure needs, human resources and labour market, communications, signalling, and other things that should be considered in a competitive destination.

The Triple Helix, as a theoretical and practical model allow the three main sectors, Academy, Government and Industry to join efforts to strengthen the tourism industry. The Triple Helix from Etzkowitz and Leydesdorff show that innovation can have its origins in the academy, considering that knowledge is the most valuable element nowadays in the innovation policies around the word.

The Triple Helix propose that academy should work with the research and design of products and services, the government, as the policy maker should provide elements that enable academy and the industry to work together in the incorporation of research, development of products and services and funding projects.

This model, designed from the Soft System Methodology considering the Triple Helix as the basis of the tourism offer propose a better way of building policies, products and services for people with disabilities and senior adults, making more competitive the destinations and it can be considered not only for this population, research has shown that accessible destinations are conceived as better places for all people because its conditions allow tourists to walk along, drive, take a bus in an easier way.

Keywords: Tourism, Triple Helix, Innovation, Soft System Methodology

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INTRODUCTION

The social inclusion of vulnerable groups like the elderly people and people with disabilities in tourism involves studying the system from different perspectives, architectural aspects are not the only barrier to these population sectors, other factors like cultural, political and economic influence, so the study should be from a systemic analysis and synthesis.

Tourism in Mexico represents 8.7% of gross domestic product and according to the Instituto Nacional de Estadística, Geografía e Informática (INEGI, 2015), it corresponded approximately 115 billion dollars of a total of 1,283 in 2014. With the passage of time this has led the federal government to provide a particular interest in tourism due to its economic contribution and the job creation directly, which contributes with the 8.2% of a 100%. Sun and beach have been the main elements that Mexico has presented as their main attractions in tourism due to its geographical position (SEMARNAT, 2015) with a coastline of 11,122 kilometers, with 17 states of a total of 32 with opening to the Atlantic and Pacific Ocean, Gulf of California and the Caribbean Sea.

Domestic tourism consumption in 2014 (DATATUR, 2015) was 1, 846, 685 million pesos against 254.592 of tourists entering the country, which means 87.9% of 100% of tourists. This implies that the domestic market provides the largest amount of foreign exchange, showing a clear need to create the optimum conditions to address emerging local markets.

The National Development Plan 2013-2018 developed by the Federal Government of the Republic (2015) works with five national goals: Mexico in Peace, Mexico with Inclusion, Mexico with Quality Education, Mexico with Prosperity and Mexico with Global Responsibility, it has three transversal axes: Democratizing Productivity, Near and Modern Government and Gender Perspective. Of these five goals, Mexico with Inclusion, Prosperity and Global Responsibility directly involve vulnerable populations.

The elderly population in Mexico is growing, representing the need to design public policies in the tourism sector that serve this sector, strengthening the competitiveness of the City of Mexico as a tourist destination. People seniors in several cases have a disability by age (Organización Mundial de la Salud, 2014) and should use some support as a cane or walker; therefore, it is important to note that universal accessibility, a term commonly used in the field of architecture focuses on designs that allow easy use of facilities not only to seniors but to anyone who at the time requires as people with disabilities, pregnant women and people carrying children using jogging strollers.

According to the Consejo Nacional de Población (CONAPO, 2016) seniors rate will reach 12.1% in 2020 and by 2050 will be almost 30%, with adults occupying the largest population sector in Mexico. This demographic situation should be considered by the government, academia and the private sector in order to generate the necessary actions to address this niche population that is worldwide growing rapidly. Proper design of tourism public policy is linked to research and development sector, which must lead to innovation in processes and products that meet specific population niches.

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The aim of this essay is to analyze and synthesize the elements that make up the Triple Helix to generate tourism public policies in Mexico City for eldercare and people with disabilities, for which a cabinet work on national systems of innovation is made and Triple Helix and their contributions in the design of public policies tourist and how the Soft System Methodology can integrate these variables to create a model that contributes to better practices in tourism.

DISCUSSION

Generate investment in research and development in tourism directly affects the productivity of the various sectors, generating new ideas that are carried out through a process of innovation, leading the actors involved to create new options to offer its customers. Within this process technology is fundamental, in the tourism industry something that has produced great benefits is the generation of knowledge and companies that have managed to distribute and apply it effectively have favorable results due to the competitive advantage that gives them the creation of products and innovative and attractive services observed in reservations, services in hotels, marketing, distribution and even in migratory processes.

Innovation in these processes and services would only be effective if there is an adequate staff training, specialized, reaching optimal results achieved by meeting the objectives of the company through a process that begins with the education and training.

Joseph Schumpeter (1934) defined innovation in a general sense through his Theory of Economic Development proposing that innovative activity is the most important force for economic growth through its "creative destruction" that involves breaking processes, ideas, methods and practices that impede growth.

Peter Drucker (1981) determined that innovation is not a technical, but economic and social term, it means economic and social change, by the behavior of people as consumers or producers, as citizens, etc. Innovation creates new wealth or a new action potentially before new knowledge, so a real change from a situation not only involves the application of a new process or technology, society must accept it as such and only until that time It may be considered that has achieved the innovation process.

The COTEC foundation (2016) proposed innovation generalizing changes, involving the whole society from three times or states in the process of change:

1. The invention: the creation of a potentially idea, but not necessarily through products or production processes.
2. Application of the innovation idea: increase the capacity of wealth creation company, with social repercussions.
3. Dissemination: when innovation brings real benefit to society and the country.

According to PromPeru (1999) tourism for seniors and people with disabilities is a market segment that becomes increasingly important in the international tourism industry as there are factors such as:

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1. Increase the size of the market, as life expectancy increases a growing number of people with disabilities and older adults increase in the country.
2. Improvement in the earnings of this group, as a result of the existence of social tourism programs, subsidies, discounts, programs of financial support, pensions, etc.
3. Technological improvements that allow more information and displacement, and thus allows the realization of travel, encourages communication between internet service providers and older adults and people with disabilities allowing know the opinions of other users with disabilities on destinations that are offered as accessible.
4. Increase in facilities and services, therefore an awareness of existing requirements and in response to the growing demand for them, in this sense the Mexican federal and local government through legislation promote social inclusion, sensitizing the private sector on the importance of providing services with universal accessibility, not only thinking of the elderly but other groups such as disabled people and families with children.

The design of an inclusive tourism model must be based on different variables (James, 2015) to consolidate an attractive tourism which focuses not only in the human rights and the economic aspects, the social component (Baggio, 2014) should be considered when trying to generate changes in tourism services, this feature being perhaps the most difficult to treat, facing discrimination among other social attitudes (Olsen & Heaton, 2011) that are present in our society.

The increase in this populations is creating a new market niche for tourism (Darcy, Cameron, & Pegg, 2010) suggesting changes in accessibility features and social perception that people have about this population. Tourism is generally designed from people who can move around and see, leading to designs based for people without disabilities (Aitchison, 2003). The tourism industry is considered as having barriers in its supply chain services, destinations and products (Bowtell, 2015); this is a long process because of the conditions on which are built and designed both tourism products and services.

Factors related to accessible tourism are (Bowtell, 2015):

Lodging, restaurants: Facilities such as ramps, elevators, doors and wide aisles, accessories suitable height, handrails, well distributed rooms, adequate sanitation, public areas, and tools for communication.

Transport: Accessibility in transport, trained to care for the disabled staff.

Services: trained and specialized personnel.

Meeting the needs of people with disabilities and older adults is linked to the proper management of resources, materials, technical and human resources and promoting these

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actions contributes to the generation of innovative products and thus increase the competitiveness of tourist destinations elements.

The Global Innovation Index (Cvetanović & Sredojević, 2012) was designed by the Confederation of Indian Industry's (INSEAD, The Business School for The World) and presented the relationship in innovation indicators. There are 5 groups that are classified as inputs including institutions, human capital and research, infrastructure, market sophistication and business locations. These inputs determine the benefits of stimulate innovation, countries are listed according to these indices value of innovation.

The Global Competitiveness Index presents comparable elements and variables that are linked to macro and micro aspects of competitiveness and are grouped into twelve pillars:

- Institutions
- Infrastructure
- Macroeconomic Environment
- Health and primary education
- Higher education and training (training)
- Efficiency in the goods market
- Efficiency in the labor market
- Financial market development
- Technology readiness
- Size of the market
- Business sophistication
- Innovation

Each of these elements can be measured quantitatively, using indicators such as gross domestic product, statistics, etc. and also with qualitative variables. Each and every one of the countries may consider these variables to assess their competitiveness, however, depending on the conditions of each element will have greater or lesser importance. For developed countries the most important factors to consider are the institutions, infrastructure, macroeconomic environment, health and primary education.

For other more mature higher education, training, market efficiency of goods, labor and financial markets and technological development will be priority and finally those countries with greater competitiveness development and business sophistication and innovation will be the main axis.

Countries with well-articulated national systems of innovation among public and private agencies have the highest levels of competitiveness, which implies a direct relationship between innovation and competitiveness. Countries that maintain high 5 previously explained innovation indicators are those that also have a high rate of competitiveness (Cvetanović & Sredojević, 2012).

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The key to competitiveness of a city or country elements are science and technology, tools for generating economic development. In a capitalist context research becomes a powerful way to bring about change in society from new forms of production. Latin American countries have years of delay compared with the United States, Europe and some Asian countries (Sabato & Botana, 2000), which suggests to increase production of scientific and technological research in order to contribute to regional and local development, boosting these economies on a global scale.

Moving from a figure from spectator to protagonist in technological development involves creating mechanisms that previously have not been implemented in Latin American countries. This new development involves changes in the scientific and technological infrastructure, where the educational system, laboratories, institutions, economic and financial resources should be included in the innovation process. Research and development requires articulating infrastructure with knowledge, considering the driving sources of innovation market needs, import substitution, shortage of raw materials greater or lesser availability of skilled labor and investment optimization (Sabato & Botana, 2000).

The challenges facing these innovation processes are diverse, mainly cultural, fear of investment companies, the fight against monopolies; legislation does not provide the processes or patent registration among others. These processes generate results from three separate orders, the government, the production structure and scientific and technological infrastructure. Each of these has a number of vertices with its own dynamics, institutions, production units, activities, etc. Each of them will have particular objectives but also generate inter-relationships that result in production processes with its own objectives of that system, generating new and incorporating new processes.

The interrelationships among actors will be given depending on the negotiation and the pursuit of common objectives, the government sphere will have to be always in contact with the sphere of production and scientific-technological, but the production level may not always reconcile efforts with the field of research. The creative capacity in the scientific-technological triangle will be determined based on the synergy between the three actors, the proposal is to begin at the sectorial level, where the actors have a range of more concrete action and their participation is objective. From there you can leave for a regional and then local politics, achieving expand scientific and technological triangle, achieving economic development that allows Latin American countries included in the strongest global economies (Sabato & Botana, 2000).

Triple Helix (Etzkowitz, 2012) is a spiral model of innovation that expresses the relationship between university, industry and government and involves three dimensions, the first is the internal transformation of each of the propellers, the second dimension is given from the influence of a propeller on top of another and the third is the creation of a network between the three propellers formulating new ideas and formats for high-tech development.

This innovation network gives more importance to knowledge, so the university has a main participation in these processes of technological innovation. The proposal for the designing and generation of new tourism products for the domestic market of seniors and people with disabilities is presented in the following table:

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Table 1. Conceptual framework of regional economic development knowledge-based

Stage of development	Features
Creating a space of knowledge	Concentrating knowledge in a regional context, where different actors working to improve local conditions for innovation by concentrating related to research and development operations and other appropriate activities.
Creating a space of consensus	Ideas and strategies are generated in a "triple helix" of reciprocal multiple interactions between institutional sectors (academic, public, private).
Creating a space for innovation	Attempt to achieve the goals articulated in the previous phase; establish and / or attract risk capital from public and private (combination of capital, technical expertise and business knowledge).

Source: Etzkowitz, 2002

Systems theories were initially used primarily to address problems of biological, with closed structures and processes that could structurally define (Checkland, 1981); with the passage of time the researchers developed proposals to apply the methodologies of systems to social studies. In this method there are two types of systems, hard and soft, being the first ones where the relationship is between man and machine and soft systems with a social component.

Peter Checkland (1978) conducted studies on the soft systems and raised its methodology, based on the difference and interaction between systems thinking, reality and practice. Accessible tourism, due to its characteristics requires an analysis of quantitative and qualitative, which can be analyzed as a system, considering social, economic and physical variables.

The scientific approach between accessible tourism and the Systems Theory is the Soft Systems Methodology of Checkland (1981), which is described in the following phases:

1. Starting from a situation unstructured with uncertain borders.

Tourism, as a complex activity with no linear relationships present unstructured borders, so each and every variable considered in the system will need to be considered in the model.

2. Analyze the situation to start without engaging in structuring solutions.

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Each and every variable involving social inclusion and economic, politic and social variables will be considered in the construction of the model.

3. Select the relevant system and develop its root, basic definition.

Once the variables are defined, analyzed and synthetized the relevant system will be selected, defining its basic definition and principal elements.

4. Build conceptual models of the relevant system that meets the model of what should be, in systemic terms.

In this step there will be built conceptual models considering the relevant system, approaching to a model that is considered what should social inclusion in the tourism industry.

5. Compare the product of 4 with 2 as elements to discuss possible changes with the actors.

It is necessary to compare the ideal model (established in phase 4) with the possible solutions for the problems found in phase 2.

6. Define the changes agreed by the actors as desirable and feasible, through a debate.

Once the analysis is made it is necessary to discuss them with the actors involved in the model, it is necessary to discuss with them to achieve a real scenario, with clear and reachable objectives.

7. Implement the agreed action to improve the situation.

The changes and improvement of the situation will be the last step of the model, considering the analysis made from the systemic concepts and the discussion between the involved actors, approaching to a social inclusion touristic model.

Checkland states that the phases 1,2,5 and 6 are carried out in the real world and 3 and 4 on systems thinking. The methodology aims to establish the difference and interrelation between systems thinking, reality and practice (Checkland, 1981).

CONCLUSIONS

In Mexico tourism innovation for people with disabilities and seniors should be based on the Triple Helix since it considers the three main productive structures, academy, government and the industry. This interrelationship contributes to the development of innovation in the touristic products and services, increasing the competitiveness of the destination and satisfying the needs of these sectors. In Mexico the Triple Helix as a model of innovation is not yet considered in national politics, the current proposal is

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based on innovation processes in the private sector, which has created a gap between academia, government and private initiative.

Products and services should be based on the needs of the population, taking into account social and economic factors, from the conjunction of three helices model can be designed policies that result in innovation processes that benefit the population and tourism industry.

Innovation plays a key role in the planning, design and changes around tourism accessible without concrete actions to be implemented from the government, private sector and with theoretical and methodological foundations from the academy will be difficult to generate a comprehensive proposal for changes in Mexico's tourism sector.

Social inclusion, as a multi-factorial condition can be engaged with tourism and innovation with the Soft System Methodology, which brings several models and possible realities, approximating to an accessible tourism product and service in Mexico City. The Soft System Methodology provides concepts, theory and give the possibility to compare different models in order to apply the best one in the real life.

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