ECONSTOR
Make Your Publications Visible.

A Service of
ZBW
Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Rodek, Nóra; Máhr, Tivadar; Birkner, Zoltán

Conference Paper

Innovation in the Service Sector: A Possible Recipe for Success for the Spa Towns of Central Europe

Provided in Cooperation with:
IRENET - Society for Advancing Innovation and Research in Economy, Zagreb

Suggested Citation: Rodek, Nóra; Máhr, Tivadar; Birkner, Zoltán (2020) : Innovation in the Service Sector: A Possible Recipe for Success for the Spa Towns of Central Europe, In: Proceedings of the ENTRENOVA - ENTerprise REsearch InNOVAtion Conference, Virtual Conference, 10-12 September 2020, IRENET - Society for Advancing Innovation and Research in Economy, Zagreb, pp. 504-511, https://proceedings.entrenova.org/entrenova/article/view/351

This Version is available at:
https://hdl.handle.net/10419/224716

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

https://creativecommons.org/licenses/by-nc/4.0/

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

Innovation in the Service Sector: A Possible Recipe for Success for the Spa Towns of Central Europe

Nóra Rodek
University of Pannonia, Hungary
Tivadar Máhr
University of Pannonia, Hungary
Zoltán Birkner
University of Pannonia, Hungary

Abstract

To achieve a competitive advantage, innovation, which provides the possibility to meet the customers' needs a new and higher level, is inevitable for companies. Resources providing the basis of economic development are not widely available and cannot be easily replaced; therefore, expansion of trends focusing on innovation is unavoidable. In the past decade, service sector offered the most knowledge-intensive jobs in the most developed countries of the world. The utilization of research and development results becomes more and more intense that is accompanied by the need that the decision-makers and the actors of the service sector shall have adequate information at disposal. Water is the gold of modern age, and thermal water has been the basis of thermal culture (and business) since ancient times. The Central European region is abundant in thermal water; therefore, the exploitation of such resource is a logical step. In the past decades, developments based on thermal water were carried out in the region. Nowadays, however, it is clear that innovation takes the central role of successful operation in this sector, too. This paper examines the innovation-centred services of spa towns by highlighting on the theoretical background and the necessity for the successful business operation.

Keywords: innovation, services, SPA towns, management of tourism
JEL classification: O3/O35 Economic Development, Innovation, Technological Change, and Growth

Paper type: Research article
Received: May 10, 2020
Accepted: Aug 8, 2020

Introduction

In our times full of economic and social challenges, innovation as thinking about novelties, planning and realizing something new penetrated everyday communication and the economy. After the promulgated principles and initiation of the European Union, the economic framework of the next EU cycle is centred on innovation. Nowadays, it is expected, what is more, almost compulsory that the investments and developments carried out by the enterprises should be planned and executed with an innovative approach. This provides the possibility of effective execution due to the novelty nature and future sustainability. In the meantime, the concept of innovation will be embedded in sustainable operation.

This paper focuses on a special segment, namely, the innovation plans of spa towns. Spa facilities in such towns possess a significant technological background that is mainly located "underground", protected from the tourists' eyes. The "above ground" part that can be seen by tourists is manifested in the services rendered. Moreover, natural resources, the thermal water is also an important and scarce resource, therefore, the effective management of it is of high significance. All these, in a best-case scenario, add up a noteworthy technological and service innovation that shall be viewed from the perspective of sustainability. Therefore, the goal of this paper is to overview the above-mentioned in a complex framework as this triple system operated effectively in an innovation ecosystem can bring success for the competing settlements facilities of the segment.

Theoretical Background

Casting light on the theoretical background is commenced by taking the well-known helix model under scrutiny. The triple helix model shall be regarded as the starting point of the system models. In this model, cooperation based on the interaction of state-academy-industry shall be interpreted (Török, 2006).

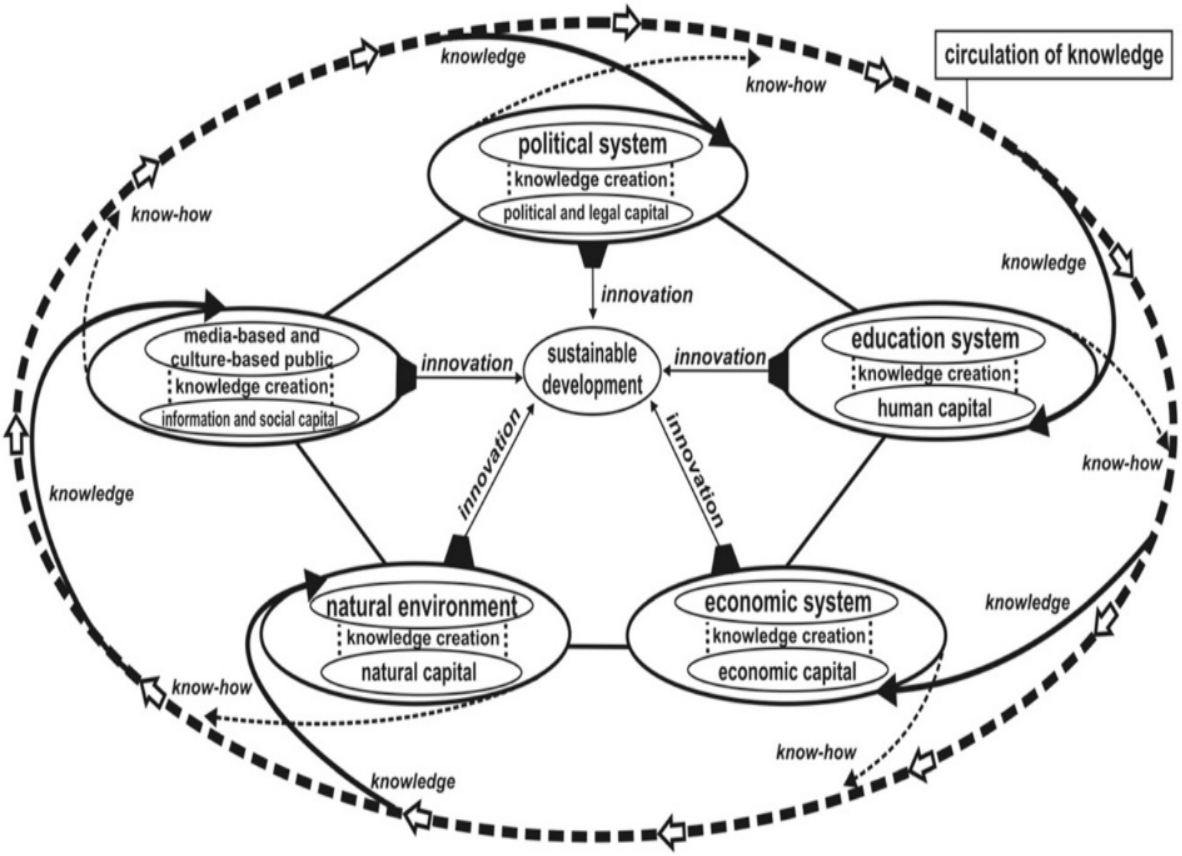
The triple helix model of Etzkowitz and Leydesdorff (Török, 2006) depicts an interactive relation based on common development (Kotsis & Nagy, 2009). The strength and intensity of the cooperation of actors greatly affect the dynamics of the innovation centre. Interactions in the model are very similar and may be compared to blood circulation in the human body. Interactions among the elements of the model energize particular levels of the circulation. The key for development is to reduce factors impeding interactions; therefore, the movement among particular spheres is facilitated, leading to the path of sustainable development. It is also crucial that the state acts as a supporting actor in this model (Birkner & Máhr, 2016).

The practical analyses of innovation systems fine-tuned the model; therefore, certain variations were added. By developing the triple helix model, Carayannis and Campbell (2009) created the quadruple helix model in which media, culture-based community space and civil society serve as the fourth helix. It becomes clear that members of the society and communities are connected to the business, technological, service and scientific fields and areas, for this reason, civil and the public sphere is also included in the university-industry-government relation system (Arnkil et al., 2010; Carayannis & Campbell, 2014; Carayannis et al., 2012).

The development of the quadruple helix model results in the quintuple helix model (see Figure 1) (Carayannis et al., 2012). From this point, a distinction is made between the natural environment of the society and the economy: namely, the ecological aspect that suggests the unified approach of the natural environment, social

environment economic development in a way during which the economic and social transition is sustainable.

Figure 1
The quintuple helix model



Source: Carayannis et al. (2012)

Hence, the basic model of the research is the quintuple helix model in which the innovation activity of the surveyed segment may be investigated. What is this exactly?

The state (and the local government) is one of the possible maintainers of facilities of spa towns. At the same time, however, the state plays a certain social-coordinating role, as it is liable for the well-being of society. This liability may be manifested in the role of offering wellness and therapeutic services (health-cures free of charge, treatments covered by social security). The state, however, also benefits from such processes as the wellness culture generates significant revenues, therefore, contributes to the GDP growth of the entire country.

Services of spa towns are mainly provided by an institution/facility that serves as the supporting leg of the model. These enterprises shall possess innovative and effective technology so their services could be unique, cost-effective and profitable. These are chiefly so-called "background infrastructures", that is to say, hidden from tourists. The service provided, however, which is rendered by tourists, therefore, palpable and tangible, and has special characteristic features. Suiting consumer's needs, the services are dynamic and provided in a competitive market – this is especially true to tourism (Nagy, 2014).

Based on their research, Hall and Williams (2008), cited by Nagy (2014) describe four characteristic features of services: - concomitance of realizing and rendering of

service, the intensity of information, importance of human factor, and critical role of organizational factors

The challenge is to combine the service elements in a way that the new "product" is regarded as a value by the consumer. The real value is realized when the service is innovative as it is better than the services provided by the competitors (Máhr, 2019).

Successful spa towns form effective cooperation with the education system, chiefly with a competent university that provides the constant training, supply of a human resource, accessibility and promulgation technological achievements, and monitoring the touristic trends.

The fifth element of the model is the natural environment, namely, thermal water that is considered as a scarce resource. There are quite a few issues regarding innovative effective management such as available water yield, water purification, reinjection of water and management of disposed water.

The innovation ecosystem in spa towns is a complex system that shall be constantly monitored and developed for competitive and sustainable operation.

Innovation-centred development possibilities of facilities of spa towns

In the subsequent part, we reflect on the innovation-centred development possibilities of facilities of spa towns. We aim to interpret such possibilities within the above-mentioned framework by applying a system approach.

Technological Innovations

A significant portion of the spa facilities of Central Europe was built in the past decades; hence, considering the upcoming technological novelties, energetic renovation is inevitable, in the following manner.

Replacement of the old and outdated gas boilers and installing heat pumps. The old boilers should be replaced by modern gas-fired condensation boilers and integrated into a system with the heat pumps. Such a system can utilize residue heat, therefore, a significant gas (as a scarce natural resource) saving is available.

Installation of a photovoltaic system. In general, spa facilities have a noteworthy roof surface that is suitable for installing solar cells. Integration of such cells in the grid (partly) covers the energy consumption of heat pumps and lighting apparatus. Covering parking lots with solar cell serves a dual purpose: on the one hand, it casts a shadow on the parking car, and, on the other hand, it contributes to the energy generation. Marketing advantages shall also be considered as a well-communicated "green" development attracts many visitors. (Nowadays, a lot of people is susceptible to "green" ideas that are manifested in their visit to that particular facility. Moreover, Electric Vehicle Supply Equipment may be installed for electric cars.

Modernization of venting system. It is suggested to update venting in the spa to a highly efficient air circulation system that provides the possibility of cost-effective and energy-saving operation.

Complex replacement and automation of the lighting system. This includes a modern LED technology and the installation of time switches and dimmer switches. The renovation contains the separation of electric lighting circuits for cost-saving purposes.

Controlling water technology in the facility monitoring system. The online water quality inspection of pools shall be carried out by quantity or quality proportionate

chemical feeding so the quality of pool water is improved. By applying optimized chemical usage, environment pollution may be reduced.

Service Innovations

Service innovations include the following.

Service development based on IT system improvement. Such development includes hardware modernization that supports the services rendered by visitors as a background infrastructure. With this, online ticket purchase in advance and separate entry corridor are available; therefore, lining up of people in front of the cashiers may be prevented. The introduction of cashless technologies, which is partly a convenience function, helps to increase the visitors' consumption (this assumption is based on empirical experience). The lockers in the spa facilities may be modernized by hardware development (i.e. installation of a constant online monitoring system).

Updating security cameras. A significant proportion of visitors requires the operation of up-to-date and reliable security cameras. The technology providing such operation has significantly developed. The application of artificial intelligence and the learning systems effectively contribute to the visitors' experience and, last but not least, their sense of security.

Smart parking lots. The online availability of free parking lots via an application significantly contributes to the improvement of the user experience. The installed sensors monitor parking activities. A parking optimizing solution surely improves the efficiency of the traffic-parking system. The most important information for parking optimizing is the real-time monitoring of particular parking lots (whether it is occupied or not) that could serve as a base for navigation solutions, information system and statistical analyzing system.

New services by introducing a new touristic product. Spa towns shall constantly focus on developing new touristic products. The Central European region, which is abundant in thermal water, provides the possibility of constant development as the thermal water originating from different layers has a multitude of contents and qualities, and services based on that grant advantage to the service providers. A good example of that is thermal water itself originating from 2000 meters and having high salt content. For this reason, both salt and water can be used effectively. Other services based on the product and the cosmetic products superbly complement the consumer experience provided by the primary product. The sustainable operation model shall include the re-use of the heat of the thermal water. In the long term, the development conceptions applying ecotouristic approach benefit more than that of the traditional touristic products/services. In the short term, the production costs may be high, however, the greenway of thinking is very trendy nowadays and the visitors tend to pay the costs of it.

Development of smart accommodation. Parallel with the technological development, the improvement and operation of accommodations may be made innovative. The bottom line is providing quality services and higher living standards with the utmost efficiency by using the least resources possible. For this purpose, modern technology is applied in the best possible way. With the investments, sustainability and improvement of services are realized simultaneously: the visitors' stay will be more comfortable, convenient healthier and secure, while more attention is paid to the quality of the environment. All services may be controlled by a smartphone that is practically transformed into a control panel. Searching, booking, paying and leaving the room are carried out via a personal device. The traditional reception vanishes, and the door of the room is opened by the

smartphone. Each device in the room is based on the IoT system and the receptionist is digitally present.

Process, Organizing-Organizational and Marketing Innovations

During the interpretation of innovation, besides the traditional product/service/technology innovation, further possibilities of it are often disregarded. By the constant modernization of processes, organizations and marketing methods of spa towns may gain competitive advantage.

Process innovation is a brand new or significantly developed method, application, process, method and activity supporting the introduction of a touristic product and service (Deák, 2009; Katona, 2006; Máhr, 2019). Such innovation for a spa town may be an innovative application such as a tourist-digital card that includes promotions and discounts.

Organizing-organizational innovation: organizing-organizational innovation is the realization of new or significantly improved organizing-organizational methods in the operation of the organization, the organizing of work or among the external partners. This could be an innovation regarding work management processes or management systems that results in a new decision-making process in the operation of the organization. Innovation may take place in the relations network with external partners, state organizations and other enterprises (Katona, 2006; Máhr, 2019). The innovative transformation of the organization, establishing new CRM systems and cooperating with educational systems may serve as a good innovation example.

Marketing Innovation: marketing innovation means the application of new or significantly improved marketing methods. This could be the more efficient survey of demands and requirements and the opening of new markets. In general, such innovation results in the significant change of prices, the promotion of touristic product and the formation of the image (Katona, 2006; Máhr, 2019). The marketing methods and solutions of a spa town may vary and greatly depend on the target group. It is suggested to look for best practices and then adapt and apply them in the everyday operation.

Relation of Innovation Performance and the Civilian Relations and Education

The social-civilian and education (academic) relations interpreted in the quintuple helix model is present in the successful innovation space in an interactive way. The performance of an innovation area of a touristic destination (spa town) greatly depends on the cooperation of the relations network and education (science) (Máhr, 2019). The size and quality of relations network and the cooperation with particular levels of education are of key importance upon creating a successful innovation ecosystem.

Conclusion

Innovation is essential in the field of the economy that is particularly true to the spa towns competing for attracting visitors and tourists. The developments based on thermal water significantly impacted tourism; however, the need for renewal cannot be disregarded. This is predominantly true to fields in which the guests immediately assess the quality and efficiency of the service rendered. In the meantime, such guests immediately provide feedback in the digital space forcing the service provider to offer constant responses, what is more, developments daily.

The present paper investigates a special field, namely, the innovation of spa towns and their spas, highlighting quintuple helix. Considering such system prerequisites the close interaction of actors within the framework of state-company-society-education-environmental sustainability. In the meantime, it becomes clear that focusing on a particular innovation area is not enough; instead, the fragile balance of the system shall be maintained.

References

1. Arnkil, R., Järvensivu, A., Koski, P., Piirainen, T. (2010), "Exploring quadruple helix: outlining user-oriented innovation models", Työraportteja Working Papers 85/2010, University of Tampere, Institute for Social Research, Work Research Centre, 2010.
2. Birkner, Z., Máhr, T. (2016), "Interpreting innovation–in another way", Vezetéstudomány-Budapest Management Review, Vol. 47, No. 10, pp. 39-50.
3. Carayannis, E. G., Barth, T. D., Campbell, D. F. (2012), "The Quintuple Helix innovation model: global warming as a challenge and driver for innovation", Journal of Innovation and Entrepreneurship, Vol. 1, Article 2.
4. Carayannis, E. G., Campbell, D. F. (2009), "'Mode 3' and 'Quadruple Helix': toward a 21st century fractal innovation ecosystem", International Journal of Technology Management, Vol. 46, No. 3-4, pp. 201-234.
5. Carayannis, E. G., Campbell, D. F. (2014), "Developed democracies versus emerging autocracies: arts, democracy, and innovation in Quadruple Helix innovation systems", Journal of Innovation and Entrepreneurship, Vol. 3, Article 12.
6. Deák, C. (2009), "Folyamatmenedzsment, folyamatinnováció" (Process management, process innovation), In: Szintay, I. (Ed.), Vezetési ismeretek II. - Tanulmányok a Vezetéstudományi Intézet munkatársaitól (Management skills II. - Studies from the staff of the Institute of Management Sciences); ME Gazdaságtudományi Kar, Miskolc, pp. 32-39.
7. Hall, C. M., Williams, A. M. (2008), Tourism and Innovation, Routledge, London.
8. Katona J. (2006), "Az Oslo kézikönyv harmadik kiadásának kiértékelése" (Evaluation of the third edition of the Oslo Manual), available at: https://nkfih.gov.hu/hivatalrol/jogelod-szervezetek/oslo-kezikonyv-harmadik (May 10, 2020)
9. Kotsis, Á., Nagy, I. (2009), "Az innováció diffúziója és a triple helix modell" (Diffusion of innovation and the triple helix model), Educatio folyóirat, Vol. 1, pp. 121-125.
10. Máhr, T. (2019), "Innovatív turisztikai desztinációmenedzsment, a turizmus jövője? (Innovative tourism destination management, the future of tourism?), PhD dissertation, Vniversitas Pannonica.
11. Nagy, K. (2014), "A turisztikai innovációk sajátosságai" (Peculiarities of tourism innovations), in Piskóti, I. (Ed.), Marketingkaleidoszkóp 2014: Innovációvezérelt marketing (Marketing Kaleidoscope 2014: Innovation Driven Marketing), Miskolci Egyetem Marketing Intézet, Miskolc, pp. 59-72.
12. Török, Á. (2006), Stratégiai ágazat stratégia nélkül? (Strategic Sector Without Strategy?), Savaria University Press, Szombathely.

About the authors

Nora Rodek, PhD is a senior lecturer at University of Pannonia Nagykanizsa Campus. She received her PhD in Management and Business Administration at the Doctoral School of the University of Pannonia. Her research topics are CSR (Corporate Social Responsibility), sustainable and responsible management, social innovation. The author can be contacted at **rodek.nora@uni-pen.hu.**

Tivadar Máhr is an active settlement development specialist, a tourism and innovation expert, the deputy mayor of a highlighted touristic destination and PhD student in Management and Business Administration at the Doctoral School of the University of Pannonia. The author can be contacted at **mahrtivadar@gmail.com.**

Zoltán Birkner, PhD is an associate professor at University of Pannonia Nagykanizsa Campus, a research specialist in the field of innovation performance of companies and regions and the manager of a water technology research and development centre. The author can be contacted at **birkner.zoltan@uni-pen.hu.**