

INTERNATIONAL SCIENTIFIC CONFERENCE

ACCOUNTING
UDIT
NALYSIS

**TRANSFORMATION OF
SCIENCE AND BUSINESS IN
NEW ECONOMIC REALITY**

BOOK OF EXTENDED ABSTRACTS

NOVEMBER 25-26, 2021



**Vilnius
University**



**Faculty of Economics
and Business
Administration**



SCIENTIFIC COMMITTEE

Chair: Prof. Rasa Subačienė (Vilnius University, Lithuania)

Members:

Prof. **Stamatis Aggelopoulos** (International University of Greece, Greece)
Prof. **Jaan Alver** (Tallinn University of Technology, Estonia)
Prof. **Armenia Andronicea** (Bucharest University of Economic Studies, Romania)
Prof. **Svetlana Bychkova** (Saint-Petersburg State Agrarian University, Russia)
Prof. **Riccardo Beltramo** (The University of Torino, Italy)
Assoc. prof. **Fitim Deari** (South East European University, Republic of North Macedonia)
Prof. **Danuta Diskienė** (Vilnius University, Lithuania)
Assoc. prof. **Joanna Dyczkowska** (Wroclaw University of Economics and Business, Poland)
PhD **Anna Iwacewicz-Orłowska** (The University of Finance and Management, Poland)
Prof. **Cristina Góis** (Coimbra Business School of Polytechnic Institute of Coimbra, Portugal)
Assoc. prof. **Tarmo Kadak** (Tallinn University of Technology, Estonia)
Prof. **Vaclovas Lakis** (Vilnius University, Lithuania)
Prof. **Teemu Laine** (Tampere University, Finland)
Prof. **Jonas Mackevičius** (Vilnius University, Lithuania)
Prof. **Aida Mačerinskienė** (Vilnius University, Lithuania)
Prof. **Athanasios A. Mandilas** (International Hellenic University, Greece)
Prof. **Iveta Mietule** (Rezekne Academy of Technologies, Latvia)
Prof. **Algirdas Miškinis** (Vilnius University, Lithuania)
Prof. **Kaire Pöder** (Estonian Business School, Estonia)
Prof. **Ihor Rekunenko** (Sumy State University, Ukraine)
Prof. **Kristina Rudžionienė** (Vilnius University, Lithuania)
Assoc. prof. **Kastytis Senkus** (Vilnius University, Lithuania)
Prof. **Rimvydas Skyrius** (Vilnius University, Lithuania)
PhD **Dorota Sokolowska** (University of Physical Education and Tourism in Bialystok, Poland)
Assoc. prof. **Alfreda Šapkauskienė** (Vilnius University, Lithuania)
Prof. **Ruta Šneidere** (University of Latvia, Latvia)
Assoc. prof. **Daiva Tamulevičienė** (Vilnius University, Lithuania)
Assoc. prof. **Deimantė Teresienė** (Vilnius University, Lithuania)
Prof. **Eleftherios Thalassinos** (University of Piraeus, Greece)
Assoc. prof. **Erika Vaiginiene** (Vilnius University, Lithuania)
Prof. **Svetlana Vegera** (Polotsk State University, Belarus)
Assoc. prof. **Halina Waniak-Michalak** (University of Lodz, Poland)

ORGANIZATION COMMITTEE

Chair: Prof. Rasa Subačienė (Vilnius University, Lithuania)

Members:

Assoc. prof. **Ramunė Budrionytė** (Vilnius University, Lithuania)
J.assist., PhD student **Daiva Raziūnienė** (Vilnius University, Lithuania)
Assoc. prof. **Kastytis Senkus** (Vilnius University, Lithuania)
Assoc. prof. **Daiva Tamulevičienė** (Vilnius University, Lithuania)
PhD **Linas Tarasonis** (Vilnius University, Lithuania)

Copyright © 2021 [Authors]. Published by Vilnius University Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution Licence, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The bibliographic information of this book is available in the National Bibliographic Databank of the Martynas Mažvydas National Library of Lithuania (NBDB).

ISBN 978-609-07-0672-5 (digital PDF)
<https://doi.org/10.15388/Transformation-of-science-and-business.2021>

Assessing Service-Based Innovation: a Theoretical and Practical Analysis

Viktorija Cohen

Vilnius University, Lithuania
E-mail: viktorija.cohen@evaf.vu.lt

Diana Šabanova

Vilnius University, Lithuania
E-mail: diana.sabanova@evaf.stud.vu.lt

Keywords: service innovation, Hertog 4D model, sport sector.

JEL code: O31, O39.

Introduction

Innovation considered to be one of the most important factors in the economic development of a company and a country. It has been extensively highlighted that the development of innovative activities, with the rise of service economy, ensures a diversified modernization of processes and increases the competitiveness in relation to its competitors, improves productivity, welfare and employment, expands international trade and economic growth. Innovation brings benefits for consumers enabling them to meet their growing needs at lower prices. Through innovation social benefits are being presented, such as the ability to address social problems more quickly and efficiently. Our understanding of the innovation process has long been related to the notion of traditional manufacturing sector, which has led to a wrong conclusion about innovations in service (Gallouj, Savona, 2009; Gallouj, Windrum, 2009) and up to today the concept of service innovation and clarity has not improved over time (Gustafsson et al., 2020). Growing service sector is driving a more important need for innovative services, and innovative processes are increasingly common in service business environments, as innovation is considered in today's world to be one of the most indispensable components of any business and an important indicator of its success. Although service innovation becomes increasingly important in consumers everyday life, there is often a problem in assessing service innovation, as the specific characteristics of services mean that they are not as easily measurable as manufacturing innovation.

The main objective of this study is to assess service innovation in sport sector using Lemon Gym sports club chain company and its customers.

1. Theoretical framework of service innovation

Service innovation is described as a new service experience or solution in one or more of the following dimensions: new service design, new customer interaction, new value system/business partners, new revenue model, new organisational or technological service delivery system (Hertog, 2010). A service is considered innovative when it differs in some feature

or use from a previous service, except routine improvements, seasonal changes and other minor changes are not considered innovation. In practice, most innovations seem to be a mix of major and minor changes and adaptations of existing services (Hertog, 2010). Tether (2005) highlights that there is not a unique pattern of innovation among firms in the service sector. Service innovation is also identified as a key source of value creation, which builds a clear customer focus (Gustafsson et al., 2020). Creating new or better value for customers is a fundamental goal of service innovation and is considered a competitive advantage for companies. This value that customers perceive and create through the use of the service is interconnected with the set of individual benefits that the service offers to its users. New services can be introduced in an already established both business or service sector and successfully improve or reshape them. However, service created value is hard to capture, especially when technology is deployed (Grant et al., 2013). The service sector comprises a wide range of activities in transportation, government, education, healthcare, social and personal services, retail and wholesale trade, entertainment, hotels and restaurants, telecommunications and finance (Randhawa, Scerri, 2015). Service innovations include new services, new service delivery processes, new organisational structures or marketing strategies (Lapenta, Sorensen, 2017) and fundamentally differs from manufacturing innovation (Drejer, 2003). Services are in most cases considered to be intangible, with no physical characteristics, it is not possible to build up a stock of services. The absence of physical characteristic in itself means that service innovations are more difficult to patent, which leads to copying and competitors. A service does not exist without a customer, who is one of the main elements of the service process. This is why it is harder to assess a service as it is measured on the basis of the user's perception and can most of the times be tested with relation to the customer's valuation. Services are heterogenic and cannot be completely identical due to the individual consumer perception and variability in service quality (Randhawa, Scerri, 2015). It is suggested that service innovation should emphasize the outcome of a development process rather than how it was realized (Gustafsson et al., 2020). As service is fuzzy and difficult to define it is also difficult to measure its output and productivity (Morrar, 2014).

2. Research framework

Using basic Hertog 4D model that classifies service innovation by four dimensions: new services, customer interface, service delivery system and technological capabilities, this paper examines features of an innovative company, identifies internal and external factors influencing implementation of innovation process aspects in a low-tech sector service-based company. Empirical study aims to assess the value of service innovations implemented by an international sport company, which operates the LEMON chain of sports clubs in the Baltic countries of Lithuania, Latvia and Estonia. A customer survey was carried out in the three countries. The survey data was collected through online questionnaire platform. Total number of respondents was 775. Data processing was carried out using SPSS (Statistical Package for Social Sciences) software. Following the analysis and interpretation of the data collected, a statistical hypothesis testing approach is applied to identify the relationships between different groups of users and the assessment of perception of service innovation. Mean, standard deviation and variance are calculated for data expressed on an interval and Likert scale, and frequencies are calculated for data expressed on a rank and nominal scale.

Cronbach's alpha coefficient is calculated to check the internal consistency of the individual scales of the questionnaire. The non-parametric Mann-Whitney U test (for two independent samples) and Kruskal-Wallis (for three or more independent samples) test are used for the comparison of the calculated Likert scale data. The χ^2 test (chi-square) is used to identify differences in responses between groups of respondents of different ages, and the proportions were additionally compared by means of a z-test.

Conclusions

The results demonstrate that customers' value perception of service innovation depends on the overall national and global environment. According to the results the global pandemic has redesigned the service innovation awareness in the sport sector, customers now give greater priority to improved hygiene, real-time monitoring of the number of customers in sport clubs, membership retention option. Some primary findings propose interesting insights that although the level of education has no effect on how service innovations is valued by customers, the age and gender of the customers do affect, which might be related to changes in general principles and lifestyle. Finally, customers that attend sport clubs less frequently value implementation of service innovation higher than the ones who attend gym on a frequent basis.

References

1. Alvarez, R., Bravo-Ortega, C., Zahler, A. (2015). Innovation and Productivity in Services: Evidence from Chile, *Emerging market finance and trade*, 51(3), 593–611. <https://doi.org/10.1080/1540496X.2015.1026696>
2. Den Hertog, P. (2010). *Managing Service Innovation: Firm Level Dynamic Capabilities and Policy Options*. Ph.D Thesis. Amsterdam Business School Research Institute, Utrecht, Netherlands. Available at: https://pure.uva.nl/ws/files/1485795/80520_05.pdf
3. Drejer, I. (2003). Identifying innovation in surveys of services: a Schumpeterian perspective. *Research Policy*, 33, 551–562. Available at: [http://www.iot.ntnu.no/innovation/norsi-pims-courses/Service-Innovation-Pedersen-Kristensson/Drejer%20\(2004\).pdf](http://www.iot.ntnu.no/innovation/norsi-pims-courses/Service-Innovation-Pedersen-Kristensson/Drejer%20(2004).pdf)
4. Gallouj, F., Windrum, P. (2009). Services and services innovation. *Journal of Evolutionary Economics*, 19, 141–148 <https://doi.org/10.1007/s00191-008-0123-7>
5. Gallouj, F., Savona, M. (2009). Innovation in services: a review of the debate and a research agenda. *Journal of Evolutionary Economics*, 19(2), 149–172. <http://dx.doi.org/10.1007/s00191-008-0126-4>
6. Grant, K., Alefantos, T., Meyer, M., Edgar, D. (2013) Capturing and measuring technology based service innovation – A case analysis within theory and practice. *International Journal of Information Management*, 33(5), 899–905. <https://doi.org/10.1016/j.ijinfomgt.2013.07.002>
7. Gustafsson, A., Snyder, H., Witell, L. (2020). Service innovation: a new conceptualization and path forwards. *Journal of service research*, 23(2), 111–115. <https://doi.org/10.1177/1094670520908929>
8. Lapenta, F., Sorensen, F. (2017). *Research methods in service innovation*. Edward Elgar Publishing Limited <https://doi.org/10.4337/9781785364860>
9. Morrar, R. (2014). Innovation in services: a literature review. *Service and Innovation*, 6–14. Available at: <https://www.timreview.ca/issue/2014/april>
10. Randhawa, K., Scerri M. (2015) Service Innovation: A Review of the Literature. In: Agarwal, R., Selen, W., Roos, G., Green, R. (eds), *The Handbook of Service Innovation*. Springer, London. https://doi.org/10.1007/978-1-4471-6590-3_2