



**TECHNIUM**  
**SOCIAL SCIENCES JOURNAL**

**Vol. 17, 2021**

**A new decade  
for social changes**

[www.techniumscience.com](http://www.techniumscience.com)

ISSN 2668-7798



9 772668 779000

## **Determine New Product and Service Development in Health Ecosystems in Malaysia in conjunction with the new crisis**

**Dr. Hebatallah Mostafa Ali**

MSU Master student, University of Wales postgraduate student

[heba\\_sfi@yahoo.com](mailto:heba_sfi@yahoo.com)

**Abstract.** Healthcare has encountered significant challenges over the past few years in order to modify its policies and strategies to experience the stress of elevating costs, innovation, and altering regulations (Annanperä, Liukkunen & Markkula, 2015). In this regard, new product development is one of the sparkling issues. A massive amount of the research budget is invested to innovation, specifically for innovative or novel biotechnological, pharmaceutical, health and medical services or products (Koskela-Huotari et al., 2016). A new cultural setting is emerging, emphasized on per-requisites, which have to be collaborated with technologies and innovations so as to fulfill successful objectives (Wartena, Muskens & Schmitt, 2009). Consequently, this study has emphasized on the analysis of an innovative service ecosystem that is a private clinic providing services for kidney diseases. Comprehending healthcare as a service ecosystem needs emphasis not merely on a focal firm approach to innovation emerging from an innovative tactic to resource integration or from service innovation, but also on undertaking the limelight of various internal and external stakeholders in the revitalizing of medical services. Therefore, a qualitative analysis based on the interviews from various stakeholders of health ecosystem is conducted.

**Keywords.** Healthcare innovation, Malaysia healthcare ecosystem, new product innovation, ecosystem, healthcare system

### **Objectives**

This study addresses the main research questions undertaking the service ecosystem perspective:

**Question 1:** Which strategies are integrated for launching new product development?

**Question 2:** How do stakeholders create value in a novel and beneficial way?

### **Literature Review**

An important approach for firms to expand with respect to revenue, profit, and market share is the competence for commercializing new product development (Adner, 2006). A number of companies have implemented a formal new product development process in order to develop and bring new products to the market such as the notion for launching process (Frow, McColl-Kennedy & Payne, 2016). Increasing technical complexity, market uncertainty, elevating development cost, and mitigating product lifecycles challenge the success of new product development. Accelerating new product development, and sharing costs, risks, and profits by outsourcing and collaboration were one of the important ways for responding to this

issue (Ciasullo, Cosimato & Pellicano, 2017). Research on NPD has been conceptualized from a firm-specific procedure to implementation of various stakeholders, including lead users, partners, and suppliers to the process. Nonetheless, market opportunity is addressed by NPD via products, combining customer satisfaction, firm profitability, and available technologies (Pang et al., 2013).

Business opportunities are addressed by NPD based on a varied series of capabilities for meeting customer requirements that are beyond the ability of any single company in an ecosystem (Xiaoren, Ling & Xiangdong, 2014). In general perspective, business ecosystem members share knowledge, technologies, and resources across the ecosystem in order to provide foundation for holistic value development through the ecosystem. An ecosystem has different probable benefits in NPD as compared to a single firm (Dedehayir, Mäkinen & Ortt, 2018). It may establish wider set of products; can implement wider set of diversified abilities; and can invest additional resources as well as tolerate higher risk via cost sharing. Productivity is observed as one of the core determinants for ecosystems health such as ability of networks to continuously reduce costs as well as launch new products (Majava et al., 2016).

Emerging firms emphasize on working mutually with important stakeholders such as essential channels, lead customers, and key suppliers in dynamic ecosystems. In this regard, a new conceptualization of NPD is emerging, which place a significant focus on its inner collaborative and relational nature (Clarysse et al., 2014). Clinical collaboration and hospital networks involve number of stakeholders that needs to work together for successful designing and development of new product (Li, Zheng & Wang, 2016). Indeed, researchers have constantly considered at innovation as a procedure entailing different stakeholders able to share and combine resources in novel or interactive ways. In addition, there are comparatively few researches intended to define the models and categories of product development (Jacobs, Dendoncker & Keune, 2013). They majorly explain the sources of this product and the way different stakeholders collaborate to launch, at the same time. These two research statements have been criticized while existing literature calls for a third and fake approach to product able to embrace every sort of innovation around all industries and sectors, in which the emphasis is transmitted onto the investigation of the ideal contribution of different stakeholders in order to change ecosystem perspectives, the stakeholders that enact them, and the associated practices (Li & Garnsey, 2013).

From the ecosystem viewpoint, the reconfiguration of institutional structures is concerned for product development, which is a process intended to change rules, values, and norms at the branches of resources implementation (Lindman, Kinnari & Rossi, 2015). In particular, firms no longer considered at product development as an internal and proprietary process, but they undertake it as a social process entailing various different stakeholders or products throughout and across firms.

### **Method**

This study is a qualitative study implemented a case study approach and undertaken the healthcare system in Malaysia based on the interactions of multiple stakeholders occurring at various ecosystem levels and seeking novel or dynamic value propositions able to co-create mutual value on its approach to product development. The study has considered clinics procedures and hospital networks as the principle structures of healthcare ecosystem that involves number of stakeholders to work on the newer product and its development. Moreover, the study has administered the interviews via a series of open-ended questions and carried-out in the company premises of the interviewees. Initially, the study has conducted interviews from human resource manager, quality manager, local general manager, and product development

manager so as to acquire a general viewpoint on the strategic orientation of the company toward product development.

Afterward, the study has interviewed public hospital general manager, research and development manager, and marketing manager following a top-down approach. Lastly, doctors and nurses, and representative employees were interviewed for obtaining information regarding the approach new product development was initiated. These individuals are considered for the interviews because of their role in health ecosystem to develop a new product. Top-down approach has facilitated the interview process by providing basic information about new product development and involves lower stakeholders in first fewer interviews from the top management. The study has conducted a qualitative analysis to examine all collected data and information. Particularly, the data collected were classified through new product development category.

### **Results**

The clinic involved various different stakeholders in order to co-create a new tactic for the care of renal diseases on the basis of customized and effective services occurring from the physicians and patients experience sharing. In addition, the clinic has the competence for developing, integrating, and making the recent medical technologies humanly possible. In particular, the hospital networked clinics provided different advanced medical protocols and tools as compared to conventional clinics. It is a fact that the hospital comprehensively reconsidered the conventional approach to emo-filtration, which make their patients capable to encounter a new way to emo-filtration by merging physical and chemical solutions, and innovative technologies for removing liquids and toxins from the blood as compared to conventional hemodialysis. The product development manager indicated, *“The collaboration with the hospital was intended to develop advanced tools and products, thanks to the integration of the most advance tools for substantially mitigating the extent of mortality and hospitalization among kidney patients.”*

In particular, the approach was revitalized by the hospital to the offering of medical services, in order to contribute to provide them a patient and human-centered pattern, intended to make renal disease patients competent for living a normal and secure life in every situation, even when they plan for holidays. In this regard, the hospital developed close and particular collaboration with some globalized tourist agencies and other operators active in entertainment and accommodation in Malaysia. Consequently, they contributed to allow patients for experiencing a safe and high-quality holiday, attributed by high abilities in medical tourism.

Thereby, the association with several stakeholders active in accommodation and tourism established the hospital network for supporting their patients in order to travel globally. The so-called tourism facility was sufficient enough to respond to the medical per-requisites and aspirations of a normal life of renal disease patients. According to the statement of one of the respondents, *“We can also collaborate and share details and experiences with active actors in Malaysia and abroad, thanks to their services and accommodation programs, on the basis of tourism programs”*.

The findings have underlined the competence of the respondent company for establishing inter-organizational associations that established it to go far-ahead its limitations, engaging other institutional stakeholders in mocking practices able to change the regulations of healthcare service offering and improving the emergence of a new product development model. The competence for detecting new opportunities regarding co-creation has allowed the company for institutionalizing a new business model allowing higher resource proportion for value development, transforming from a conventional business model on the basis of a

hierarchical system and competitive values. A renewed approach was also developed and institutionalized by the hospital to medical service, which converted a new value co-creation that into a solid service innovation that is the innovative informative system.

### **Conclusion**

The hospital was able to establish new rules or standards for the overall healthcare industry with respect to the institutionalization of a new value co-creation that is online hemofiltration, with other private and public providers. This allowed a general enhancement of renal disease care, thanks to the commercialization of those practices intended to ensure quality through innovative medical practices drawing on critical social consequences such as mortality and hospitalization among dialysis patients, longer life-expectancy, and the mitigation of the extent of physicians' errors. Technology is not merely an important tool for exploring new approaches for engaging different stakeholders in new product development procedures, but also as an aspect able for fostering the occurrence of novel and existing innovations based on a dynamic and social-oriented perspective.

### **References**

- [1] Adner, R. (2006). Match your innovation strategy to your innovation ecosystem. *Harvard business review*, 84(4), 98.
- [2] Annanperä, E., Liukkunen, K., & Markkula, J. (2015). Innovation in evolving business ecosystem: A case study of information technology-based future health and exercise service. *International Journal of Innovation and Technology Management*, 12(04), 1550015.
- [3] Ciasullo, M. V., Cosimato, S., & Pellicano, M. (2017). Service innovations in the healthcare service ecosystem: a case study. *Systems*, 5(2), 37.
- [4] Clarysse, B., Wright, M., Bruneel, J., & Mahajan, A. (2014). Creating value in ecosystems: Crossing the chasm between knowledge and business ecosystems. *Research policy*, 43(7), 1164-1176.
- [5] Dedehayir, O., Mäkinen, S. J., & Ortt, J. R. (2018). Roles during innovation ecosystem genesis: A literature review. *Technological Forecasting and Social Change*, 136, 18-29.
- [6] Frow, P., McColl-Kennedy, J. R., & Payne, A. (2016). Co-creation practices: Their role in shaping a health care ecosystem. *Industrial Marketing Management*, 56, 24-39.
- [7] Jacobs, S., Dendoncker, N., & Keune, H. (Eds.). (2013). *Ecosystem services: global issues, local practices*. Elsevier.
- [8] Koskela-Huotari, K., Edvardsson, B., Jonas, J. M., Sörhammar, D., & Witell, L. (2016). Innovation in service ecosystems—Breaking, making, and maintaining institutionalized rules of resource integration. *Journal of Business Research*, 69(8), 2964-2971.
- [9] Li, J. F., & Garnsey, E. (2013). Building joint value: Ecosystem support for global health innovations. *Advances in strategic management*, 30, 69-96.
- [10] Li, X., Zheng, Y., & Wang, C. L. (2016). Inter-firm collaboration in new product development in Chinese pharmaceutical companies. *Asia Pacific Journal of Management*, 33(1), 165-193.
- [11] Lindman, J., Kinnari, T., & Rossi, M. (2015). Business roles in the emerging open-data ecosystem. *IEEE Software*, 33(5), 54-59.
- [12] Majava, J., Leviäkangas, P., Kinnunen, T., Kess, P., & Foit, D. (2016). Spatial health and life sciences business ecosystem: a case study of San Diego. *European Journal of Innovation Management*.

- [13] Pang, Z., Chen, Q., Tian, J., Zheng, L., & Dubrova, E. (2013, January). Ecosystem analysis in the design of open platform-based in-home healthcare terminals towards the internet-of-things. In 2013 15th international conference on advanced communications technology (ICACT) (pp. 529-534). IEEE.
- [14] Wartena, F., Muskens, J., & Schmitt, L. (2009, February). Continua: The impact of a personal telehealth ecosystem. In 2009 International Conference on eHealth, Telemedicine, and Social Medicine (pp. 13-18). IEEE.
- [15] Xiaoren, Z., Ling, D., & Xiangdong, C. (2014). Interaction of open innovation and business ecosystem. *International Journal of u-and e-Service, Science and Technology*, 7(1), 51-64.