IMPACT OF SOCIAL MEDIA ANALYTICS ON DIGITAL INNOVATION

Ashapurna Debikumari Roy[1], Krantikola Omritokumari Das[2]

[1]*Indian Institute of Management- Kozhikode, Kunnamangalam, Kerala 673570, India*
[2,*]*Indian Institute of Management- Kozhikode, Kunnamangalam, Kerala 673570, India*
ashapurna@mail.com

Abstract

This paper explores the creation of value with the interactions of consumer and expert stakeholders in digital innovation ecosystems. We look at this by using the methodological strategy of social media Analytics that is an interdisciplinary approach which seeks to combine, expand and adapt techniques for analyzing social networking information. By utilizing the SMA framework to observe user generated contents posted on social networking platforms, we evaluate just how consumer and expert stakeholders associate value to Spotify, a new entrant in the Swedish publishing business which offers digital subscription service for streaming audiobooks. Drawing out of a dataset of 2,633 user generated contents, our findings illustrate the value creating methods where stakeholders within Spotify's ecosystems associate value to Spotify's digital innovation. The findings of ours more highlight which the value creating methods arising out of the interactions of consumer and expert stakeholders in social networking give rise to the hybridization of value, in which several types of value groups merge in the studied situation. This analysis contributes to extant literature on management of innovation and info systems by shedding light on the way great is produced by evaluating value creating methods as an outcome of the interactions between stakeholders and checking out the ensuing merging of value groups inside digital innovation ecosystems and hence exploring the hybridization of worth

Keywords

Value creation; digital innovation ecosystem; social media analytics

JEL Classification

M32, M30

DOI: https://doi.org/10.14311/bit.2022.01.06

Editorial information: journal Business & IT, ISSN 2570-7434, CreativeCommons license published by CTU in Prague, 2022, http://bit.fsv.cvut.cz/

Introduction

Organizations should create value for their survival and success. The subject of value development, talking about the relative length of value which plays a role in the energy of the last really good or maybe service to end users, has acquired a lot of interest in extant literature (Bresciani, Ciampi, Meli, & Ferraris, 2021). The procedure for value creation itself must think about the dynamics of value categories. Consequently, a vital difference should be made in conditions of value development and benefit groups. In the literature, benefit categories refer to the characteristics of value in terminology of, functional, for example, emotional and social value (Jahan & Sazu, 2022). These root benefit groups consequently help value creation.

Parallel to the evolvement of literature on value development, an expanding number of groups have produced digital development in terminology of new service and products offerings (Aversa, Hernandez, & Doherty, 2021). This kind of organizations work with digital technologies to create value and give fantastic benefits and significance on the economy.

Regardless of an implicit presumption of the benefits of stakeholder interactions in digital innovation ecosystems, the job of interactions between stakeholders for value development hasn't been commonly talked about in the digital innovation and entrepreneurship literature (Sazu, Does Big Data Drive Innovation In E-Commerce: A Global Perspective?, 2022). Extant studies are generally centered on how firms create value by themselves, like those examining factors which facilitate value creation. With a focus on the firm 's side when talking about value development, present scientific studies continue to be restricted in 2 main methods.

For starters, how great is produced as an outcome of stakeholder interactions remains specific and unclear practices to create great remain underspecified. One study argue that extant studies have neglected to analyze value creating methods in social media-based communities, indicating the confined empirical studies on value creating methods (Ghasemaghaei & Calic, 2020). Furthermore, the transforming character of value resulting from the development of the digital economy highlights the point that value is not fixed which there's a chance of multi-dimensional value creating methods in the context of digital innovation (Sazu & Jahan, The impact of big data analytics on supply chain management practices in fast moving consumer goods industry: evidence from developing countries, 2022). Consequently, empirical assessments are essential with regard to checking out value creating methods for value development as an outcome of the interactions between stakeholders.

Next, existing literature in the originality management and Information Systems literature additionally lacks empirical studies of assessing benefit groups (Gobble, 2013). Benefit categories, predominantly examined to the marketing/consumer conduct literature, are associated with the various value which customers have of a specific product and/or service (Niebel, Rasel, & Viete, 2019). Despite investigation on value categories especially in the marketing/consumer conduct literature, our comprehension is still limited in terminology of how you can incorporate the diverse benefit categories.

In order to pack re-search spaces, this newspaper seeks to examine just how value is produced through innovative value creating methods and the merging of value groups as an outcome of the interactions of stakeholders in digital innovation ecosystems (He, 2021). We do this by using the methodological strategy of Social media Analytics that is an interdisciplinary approach which seeks to combine, expand and adapt techniques for analyzing social networking information. By utilizing the connected Social media Analytics framework for the objective of social media monitoring, data preparation data analysis, we analyze precisely how users of social networking associate value to Spotify.

The study of ours offers 2 primary contributions to extant literature on the control of IS. and innovation First, the study sheds light on the way great is produced by evaluating value creating

methods as an outcome of the interactions between stakeholders. Next, we contribute by checking out the resulting merging of value groups inside digital innovation ecosystems and hence exploring the hybridization of worth.

The rest of this paper is organized as follows. We 1st supply an evaluation of digital innovation and digital entrepreneurship with a certain focus on value development and the various benefit groups provided in extant literature. Following this particular, we elaborate on the method of ours of SMA, which includes the methods for analysis and data collection. We then present the results of ours in the context of consumer and expert domains of stakeholders and the interactions between them. We then outline the discussion of ours of findings with our implications and contributions, and eventually conclude with directions and limitations for future research.

Literature Review

Digital innovation and digital entrepreneurship

Exploration in the area of entrepreneurship has frequently acknowledged the benefits of digital entrepreneurship in the area of IS (Kayser, Nehrke, & Zubovic, 2018). Digital entrepreneurship helps with the exchange, acquisition and transfer of understanding with the usage of technology to begin new means of conducting business. Information technology systems through web-based platforms facilitate peer-to-peer tasks which in turn enable digital entrepreneurs to give unique and new combinations of resources (Sazu, Does Big Data Drive Innovation In E-Commerce: A Global Perspective?, 2022). The frequently attached IT methods thus offer mechanisms because of the evolution of digital infrastructure, particularly in terminology of adoption, scaling and innovation, in addition to the usage of social networking. The promises of impressive digital technology which infrastructure systems further allow digital business owners to quickly scale the innovation of theirs through data driven operation, immediate release, and swift transformation. This kind of speed, scale and flexibility of innovation from digital entrepreneurship tasks basically create promote potentials, innovation and value development for the company and society (Jahan & Sazu, 2022).

The digital economic climate has additionally facilitated the expansion and acceptance of new digital development like crowdsourcing, collaborative sharing economy, on demand web services and virtual marketplaces. This kind of changes in the company model and value proposition create present challenges and disruption for incumbent organizations and both start-ups (Sazu & Jahan, Impact of big data analytics on business performance, 2022). A lot of startups, as new entrants, defend their consent by using intellectual property and patents with a selection of open innovation relationships (Wise, 2022). Similarly, incumbent firms constantly innovate in order to discourage competitive entry by innovative entrants also to keep the market position of theirs. One way where they actually do this's via co creating with people as stakeholders to better engage them in the use and delivery of service or product offerings (Lekhwar, Yadav, & Singh, 2019). In this context, stakeholders collaborate, eat and expect services whilst simultaneously producing user generated contents in social networking, which basically provides both challenges and opportunities for organizations (Lekhwar, Yadav, & Singh, 2019). Nevertheless, importance from digital innovation which is produced with and involving stakeholders still presents an underexplored problem, requiring far more experiments in the digital area.

Digital innovation and value creation

Value creation in the digital economy is especially challenging given the point that rivals might quickly replicate or even substitute firms' offerings or resources. Driven by the advancement and the Internet of technology, numerous businesses have shifted the mindset of theirs out of merely being the providers of services and products to getting the facilitators of open collaboration and innovation

for new ideas in addition to innovation in the digital economy (Shakya & Smys, 2021). In the healthcare analytics literature, a few research has reported which consumers as stakeholders have frequently become co-creators of value rather than basically remaining passive conclusion recipients of service provision (Haque & Akter, 2022). They're as well frequently using social networking to go over choices about products, processes or services, producing a wealth of user generated contents in the procedure. This means that value from digital development is frequently produced via social networking interactions between stakeholders inside the ecosystems (Li & Zhang, 2021). This view of value creation indicates the dynamic interactions between stakeholders and firm rather compared to value just being produced by the firm (Wright, Robin, Stone, & Aravopoulou, 2019).

We argue that value development from digital innovation can be describe in conditions of new means to distinguish various benefit categories. The theoretical framework of ours, mirroring extant literature, is offered (Kayser, Nehrke, & Zubovic, 2018). Stakeholders create value with all the firm and so they additionally constantly interact with other stakeholders inside the digital innovation ecosystem. These interactions likely lead to new value creating practices. Value categories

Methods

In order to explore multi-dimensional methods and just how various benefit groups are merged throughout the interactions of stakeholders in digital innovation ecosystems, user generated contents drawn from social networking platforms were utilized as the empirical scope. Information collection in social networking is now ever more popular strategies related to analyzing social media have evolved significantly in the recent past in alignment that is close to the continuous' restructuring' of the social networking landscape.

Social media tracking

The tracking phase was carried out in 2 subsequent steps. Within the initial phase, the technique for data collection, i.e. the tracking strategy and the monitoring technique, was created. As for the monitoring strategy, a SMA researcher has 3 major options of tactics based on the defined objective of the research: using either the keyword, actor or URL related method. The actor related approach was chosen because of this study for two primary reasons. For starters, this study is about the methods in which multi-dimensional methods and just how various benefit groups are merged throughout the interactions of stakeholders in the digital feature ecosystems. Second, in our specific case we focused the empirical setting of ours within the context of Spotify.

Information preparation

Following data collection, the information was preprocessed before data analysis. In keeping with the social media Analytics framework, this's performed by yourself removing spam along with previewing whether collected information relates to the trend that the researcher intends to

learn. Right after previewing the dataset, 252 user generated contents in the dataset which associated with various other phenomena compared to the people sought after, were selected. These contents were next excluded from the dataset, leading to the remaining amount of 2,633 user generated contents distributed throughout various social networking platforms.

Information analysis

Adopting the information planning step, the researcher will be to select the evaluation strategy and related information analysis strategies. As for the evaluation strategy, the Social media Analytics framework offers a somewhat wide selection of alternate options in regards to if structural

characteristics, sentiments, or maybe topic and trend related patterns must be evaluated. As for the information analysis methods, a somewhat broad array of options can also be available. A regression analysis, interpersonal network analysis, sentiment analysis, content analysis, or maybe trend evaluation could be selected, based on re-search question leading the researcher, and in relation to considering whether fixed data analysis and powerful data analysis is ideal vis-à-vis re-search question. As the current study was created for the goal of visiting multi-dimensional methods and just how various benefit groups merge, content analysis was picked as the information analysis technique. Much more particularly, content analysis was used in 3 related stages in terminology of: one) categorizing and identifying stakeholders inside the context of Spotify's digital innovation ecosystem, two) identifying methods where the identified stakeholders took part, and three) evaluating the methods in which various benefit groups determined in extant literature became incorporated in the determined practices.

FINDINGS

Digital innovation and digital entrepreneurship

The customer domain was identified including 9 multi-dimensional methods depending on which value is produced by consumer stakeholders. In total, 1,830 user generated contents were coded to the consumer domain which collectively amounts to 69.5 % of the entire material. 3 methods are largely regarding customer experiences: the story knowledge, the contextualization of reading experience, so the reading experience. These altogether represent 53.6 % of the entire user generated contents inside the consumer domain. While all of the 3 methods are connected with real happenings, they differ in the contexts of theirs.

Professional domain interactions and consumer

In terms of how professional domains and the consumer interact, the 3 value creating methods in terms of' application',' application use experience' and' company' span across both consumer and professional domains. This suggests that these 3 multi-dimensional practices are especially interactive in the character of theirs. As for the process associated with the' application', the customer url extremely dominates with 96.4 % of the overall entries. Inside this exercise, discussions about the software are centered around various performance measures including cost, the accessible selection of books and the relative performance of its when compared with other competitors.

With respect to evaluating value development in digital innovation ecosystems, the presented findings illustrate how stakeholders, drawn out of professional domains and the consumer, incorporate varying benefit groups through multi-dimensional value creating methods, when interacting in social networking. The knowledge of value creation continues to be centered on the firm, i.e. on variables which facilitate value development mainly concentrating on a firm 's viewpoint. Our final results highlight that value development in digital spaces is dependent on the interactions between stakeholders. In the case of ours, stakeholders are those out of professional domains and the consumer. Our findings indicate the multi-dimensional methods that are explicitly sociable in the orientation of theirs in both professional domains and the consumer stand for a sizable share of the entire content in both categories. These suggest that Spotify's stakeholders arguably utilize the interactive options that come with social networking to articulate the experiences of theirs while simultaneously matching their very own tendencies to ideal encounters. In light of these results, this study provides 2 primary theoretical efforts.

For starters, extant literature has supplied a restricted understanding of exactly how great is produced to digital environments and just how certain value creating practices are utilized. The multi-dimensional methods determined in the present analysis offer first proof for the suggestion raised by

Drennan and Sorensen within that value creating methods in digital innovation ecosystems are powerful and dependent on stakeholder interactions. By empirically evaluating value creating methods in the setting of digital innovation ecosystems, we illustrate the powerful multi dimensionality of value creating methods inside Spotify's digital innovation ecosystems. This way, we help the advancement of practice and theory especially in the area of innovation management and it is.

Next, we additionally illustrate exactly how these multi-dimensional methods are connected with the various benefit groups, exactly where our findings suggest the merging of value categories, or maybe the hybridization of worth. Because of the fairly wide array of value groups and the multidimensional methods present in the empirical information, it's apparent that value development in digital innovation ecosystems is underpinned by the hybridization of value, as various customers view and then articulate various benefit categories and methods. Through constant interactions between stakeholders in social networking, multidimensional methods may therefore be known as catalysts for the hybridization of value in which several types of value groups merge to the ecosystems. Thereby, we help expanding the fairly sparse literature on value categories in digital feature ecosystems and demonstrate that a definite distinction between various benefit categories may not be feasible. Rather, we view a shift towards the hybridization of value in digital innovation ecosystems.

The presented outcomes drawn from both professional domains and the consumer additionally indicate empirical proof for the various benefit groups based on extant literature. Surprisingly, the intrinsic, extrinsic, utilitarian also functionally associated value tend to be more apparent in methods that are much more active where both customers and professionals look for methods of understanding, enhancing and building the connected functionally oriented values of the digital innovation. With respect to the consumers' perception of the psychological, epistemic, extrinsic, experiential and socially oriented multidimensional methods of guide ideas, guide suggestions and community, these methods are additionally discovered to the expert URL. For instance, the articulation of consumers' associated encounters when eating audiobooks oftentimes will be extremely emotionally charged, much like which experienced by the experts by which writers usually express the feelings of theirs with each release of the audiobooks of theirs. As a result, the interactions between professional domains and the consumer highlight an interplay between these stakeholders, facilitating additional interactions for value development in the digital feature ecosystems.

These insights offer practical implications for businesses operating in an digital environment in terminology of how you can evaluate value development in digital innovation ecosystems. For starters, the findings of ours across professional domains and the consumer are able to help companies to assess the value creation of theirs beyond the existing commercial value. The expansion of companies operating in the digital environment suggests the importance to think of new means to assess value development in digital innovation ecosystems. The findings of the research offer knowledge for practitioners with an alternative way to look for value creation in conditions of exploiting the various value categories of stakeholders. Next, the powerful character of value creating methods additionally prompts companies to purposely evaluate exactly how they are able to offer benefit in conditions of the product of theirs or service offerings to the stakeholders of theirs. The multi-dimensional value creating practices indeed

highlight the numerous ways methods could possibly generate valuation in the setting of digital innovation ecosystems.

CONCLUSIONS

In this paper, we've investigated just how value is produced via the hybridization and multi-dimensional practices of value as an outcome of the interactions of stakeholders in digital innovation ecosystems. Using the methodological strategy of Social media Analytics, our findings disclose exactly how stakeholders in social networking, drawn from both professional domains and the consumer, connect several value groups to Spotify's digital innovation. Our findings suggest the boundaries separating benefit categories located in extant literature have become increasingly blurred because of multi-dimensional value creating methods. Through the interaction among stakeholders, multi-dimensional practices serve as catalysts for the hybridization of value in which several types of value groups merge and become diffused to the digital feature ecosystems.

Notwithstanding these insights into value development, we recognize 2 primary limits of the research and future research directions. For starters, this analysis utilized user generated contents in social networking to gauge value creation. As a result of the point that SMA is restricted to capturing the methods in which value development takes place in the setting of social networking, that represents as healthy limitation of the technique in question (Haque & Akter, 2022). Next, as the empirical setting of ours is restricted to Spotify's digital innovation ecosystem in the context of Sweden, the results of ours on multidimensional value creating methods can't be generalized to all digital feature ecosystems. While the situation have been selected in relation to Aversa's idea of an important case, additional uses of SMA in evaluating value development in various business options or maybe digital feature ecosystems would contribute to the generalization of the outcomes. Future

exploration in evaluating value creation in international comparisons and different contexts in assessing the various ways where value is produced from digital innovation, might therefore be conducted by making use of several data sources. This can allow us to further understand the intricacy of value creation in the digital feature ecosystems.

References

[1] AVERSA, J., Hernandez, T., & Doherty, S. (2021). Incorporating big data within retail organizations: A case study approach. Journal of retailing and consumer services, 60. doi:https://doi.org/10.1016/j.jretconser.2021.102447

[2] BRESCIANI, S., Ciampi, F., Meli, F., & Ferraris, A. (2021). Using big data for co-innovation processes: Mapping the field of data-driven innovation, proposing theoretical developments and providing a research agenda. International Journal of Information Management, 60. doi:https://doi.org/10.1016/j.ijinfomgt.2021.102347

[3] GHASEMAGHAEI, M., & Calic, G. (2020). Assessing the impact of big data on firm innovation performance: Big data is not always better data. Journal of Business Research, 108, 147-162. doi:https://doi.org/10.1016/j.jbusres.2019.09.062

[4] SAZU, M. H., & Jahan, S. A. (2022). Impact of big data analytics on business performance. International Research Journal of Modernization in Engineering Technology and Science, 4(03), 367-378.

[5] GOBBLE, M. M. (2013). Big data: The next big thing in innovation. Research-technology management, 56(1), 64-67. doi:https://doi.org/10.5437/08956308X5601005

[6] HAQUE, S. M., & Akter, J. S. (2022). Big Data Analytics & Artificial Intelligence In Management Of Healthcare: Impacts & Current State. Management of Sustainable Development, 14(1), 36-42. doi:https://doi.org/10.54989/msd-2022-0006

[7] HE, G. (2021). Enterprise E-commerce marketing system based on big data methods of maintaining social relations in the process of E-commerce environmental commodity. Journal of Organizational and End User Computing (JOEUC), 33(6), 1-16. doi:10.4018/JOEUC.20211101.oa16

[8] JAHAN, S. A., & Sazu, M. H. (2022). Role of IoTs and Analytics in Efficient Sustainable Manufacturing of Consumer Electronics. International Journal of Computing Sciences Research, 6. doi:10.25147/ijcsr.2017.001.1.105

[9] KAYSER, V., Nehrke, B., & Zubovic, D. (2018). Data science as an innovation challenge: From big data to value proposition. Technology Innovation Management Review.
[10] LEE, J., Kao, H. A., & Yang, S. (2014). Service innovation and smart analytics for industry 4.0 and big data environment. Procedia cirp, 16, 3-8. doi:https://doi.org/10.1016/j.procir.2014.02.001
[11] LEKHWAR, S., Yadav, S., & Singh, A. (2019). Big data analytics in retail. Information and communication technology for intelligent systems, 469-477.
[12] SAZU, M. H., & Jahan, S. A. (2022). Impact of blockchain-enabled analytics as a tool to revolutionize the banking industry. Data Science in Finance and Economics, 2(3), 275-293.
[13] LI, L., & Zhang, J. (2021). Research and analysis of an enterprise E-commerce marketing system under the big data environment. Journal of Organizational and End User Computing (JOEUC), 33(6), 1-19. doi:10.4018/JOEUC.20211101.oa15
[14] SAZU, M. H. (2022). How Machine Learning Can Drive High Frequency Algorithmic Trading for Technology Stocks. *International Journal of Data Science and Advanced Analytics (ISSN 2563-4429)*, *4*(4), 84-93.
[15] SAZU, M. H., & Jahan, S. A. (2022). High efficiency public transportation system: role of big data in making recommendations. *Journal of process management and new technologies*, *10*(3-4), 9-21.
[16] MORABITO, V. (2015). Managing change for big data driven innovation. Big Data and Analytics- Springer, 125-153.
[17] SAZU, M. H., & Jahan, S. A. (2022). How Big Data Analytics Impacts the Retail Management on the European and American Markets. *CECCAR Business Review*, *3*(6), 62-72.
[18] NIEBEL, T., Rasel, F., & Viete, S. (2019). BIG data–BIG gains? Understanding the link between big data analytics and innovation. Economics of Innovation and New Technology, 28(3), 296-316. doi:https://doi.org/10.1080/10438599.2018.1493075
[19] SAZU, M. H. (2022). Does Big Data Drive Innovation In E-Commerce: A Global Perspective? SEISENSE Business Review, 2(1), 55-66. doi:https://doi.org/10.33215/sbr.v2i1.797
[20] SAZU, M. H., & Jahan, S. A. (2022). The impact of big data analytics on supply chain management practices in fast moving consumer goods industry: evidence from developing countries. International Journal of Business Reflections, 3(1), 112-128. doi:https://doi.org/10.56249/ijbr.03.01.30
[21] SHAKYA, S., & Smys, S. (2021). Big Data Analytics for Improved Risk Management and Customer Segregation in Banking Applications. Journal of ISMAC, 3(3), 235-249. doi:https://doi.org/10.36548/jismac.2021.3.005
[22] WISE, J. (2022). How much data is created everyday in 2022? https://earthweb.com/.
[23] WRIGHT, L. T., Robin, R., Stone, M., & Aravopoulou, D. E. (2019). Adoption of big data technology for innovation in B2B marketing. Journal of Business-to-Business Marketing, 26(3-4), 281-293. doi:https://doi.org/10.1080/1051712X.2019.1611082.