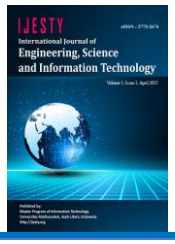
International Journal of Engineering, Science and Information Technology
Volume 5 No. 2 (2025) pp. 66-74
ISSN 2775-2674 (online)
Website: http://ijesty.org/index.php/ijesty
DOI: https://doi.org/10.52088/ijesty.v5i2.782
Research Paper, Short Communication, Review, Technical Paper



Mapping Research Variables with the Big Theme Innovative Product New Universe

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The manuscript was received on 18 June 2024, revised on 1 October 2024, and accepted on 2 February 2025, date of publication 2 April 2025

Abstract

Innovative Products combine the latest technology and creative ideas to create efficient, sustainable, value-added solutions. With new features and a more personalized user experience, product innovation drives economic growth competitiveness and addresses global challenges. This research aims to identify articles that examine the role of innovative products in the context of the new universe and provide an understanding of innovative products as a creative approach to marketing. In addition, this research aims to show and explain research mapping that is relevant to this theme. This research uses qualitative methods with bibliometric techniques by utilizing Similarity Visualization (Vosviewers) as an application. By entering keywords such as Goods, Service, Event, Experience, People, Place, Ownership, Organization, and Information, The idea was to search for articles via Publish or Perish with a total of 468 articles, which were then processed using VosViewers. The results of the analysis found the scientific mapping and the possibility of future research regarding product innovation that could be used as a recommendation variable for future researchers as a reference for subsequent articles.

Keywords: *Innovative Products, Creative Ideas, Efficient Solution, New Universe, Bibliometrics.*

1. Introduction

Technological changes such as artificial intelligence (AI), Internet of Things (IoT), blockchain and quantum computing have paved the way for unprecedented Innovation. The focus of products is not only to meet the basic needs of consumers but also to provide personalized experiences, greater efficiency and adaptability to rapid changes. At the moment, product innovation improves performance and incorporates advanced technologies to provide customers with comprehensive solutions.

As the awareness of environmental, health and sustainability issues increases, consumers in the modern era of globalization tend to prefer products that are more environmentally friendly and impactful to society. This encourages companies to take an innovative approach to developing products that meet the needs of sophisticated and discerning consumers. Factors such as the sharing economy scalable and circular products will contribute to new product innovation strategies.

The trend of the modern world is to digitize the world, allowing companies to operate more efficiently across countries. Ease of access to information and global collaboration has increased competition, which drives Innovation. On the other hand, economic shocks, changes in world politics, and global epidemics have accelerated the need for product adaptation to these changes.

In this time, creativity can no longer focus on short-term financial resources. Understanding the social and environmental impact of products is essential. The most successful products in the modern world are those designed with sustainability in mind, eco-friendly materials and production processes that use energy and natural resources efficiently.

Modern products are more innovative, connected and adaptable to consumer needs. Digitalization has made it possible to develop products that can interact in real-time with their users, such as smart devices that connect to the Internet and learn from user behaviour. In an increasingly connected world, product innovation will also focus on integrating products into the broader ecosystem and using data to provide a better user experience.

Therefore, innovative products in the New Universe era are about creating something new and how the product can adapt, be relevant, and add value amidst rapid changes and increasingly complex global dynamics.

2. Literature Review

Product innovation is how new products are created, developed and marketed [1][2]. Innovation can come from new products, services, processes, technologies, or business models. Product innovation has proven to be an essential factor leading to economic development and the growth and sustainability of companies [3] [2]. New product ideas can come from various sources, including formal research, creative employees, and cooperation with customers and suppliers. Innovative products significantly contribute to consumers' purchasing decisions and play an essential role in enabling them to differentiate between competing brands.
Increasingly imaginative product innovation has encouraged researchers to develop creative learning methods like imaginative learning models. This approach increases engagement and stimulates thinking and imagination.

Table 1. External Stimulus Factors

Factor	Description	Resources
Goods	Goods are physical objects of economic value that fulfil human needs. It consists of consumption and production goods and can be divided into free goods and economic goods based on scarcity.	[2] [4]
Services	Services can be effective by mapping the various elements of products and services in the quadrants of the matrix, which informs that different combinations of elements produce different values.	[5] [6]
Event	Identifying areas that are critical to building event resilience that foster innovative, adaptive and transformative event environments areas of high academic and managerial relevance	[7] [8]
Experience	Experience is knowledge or skills gained through involvement in an event or activity. It includes both the process and the outcome of that involvement. In a consumer context, experience influences purchasing decisions and recommendations based on personal and other people's experiences.	[9] [10] [11]
People	Man is a personal being who, by his actions, transcends nature, society, and himself.	[12]
Place	A concept that encompasses both physical and non-physical locations, involving individual identities, memories and experiences. The place is shaped by the interaction between geographic location, physical characteristics, culture, and personal perceptions, so its meaning varies for each person.	[4] [13] [14]
Ownership	Ownership is fundamental to corporate strategy, organization, and governance, with a focus on its incentive effects.	[6] [15] [16]
Organization	Organizations play a role in combining resources and actors for product development. Geographical network entanglements may affect the effectiveness of Open Innovation in different regions. In the future, organizations must develop new capabilities and competencies to realize effective PSS design.	[17] [18] [19]
Information	Whether utilitarian or hedonic, information acts as a unique product that can be marketed and consumed. Unlike goods and services, information is not consumable and can be used repeatedly without losing quality.	[19] [20] [21]
Ideas	Ideas play an important role in engineering design and new product development, so a phased approach is needed to integrate and evaluate effective digital interventions. The sharing economy currently focuses on sharing existing products and services.	[22] [23] [24]

External stimulus and cognitive response are used as keywords in bibliometric analysis. Factors that researchers often use to express cognitive responses are Benefits, Drivers, Barriers, and Challenges. Meanwhile, researchers often use factors to express cognitive responses such as Benefits, Drivers, Barriers and Challenges, as seen in Table 2.

Table 2. Cognitive Response Factors

Factor	Description	Resources
Benefits	Product innovation can improve the efficiency and effectiveness of technology development and create a competitive advantage in an increasingly fierce market. It also focuses on applying Experience Feedback (EF) systems in industrial enterprise product lifecycle management (PLM).	[25] [26] [27]
Drivers	Innovation drivers such as market preferences, scientific knowledge, technology, infrastructure, policies and innovation niches affect satisfaction with product quality, which varies over time depending on the attributes that make up the perception of quality.	[28] [29]
Barriers	Barriers to product innovation include a lack of corporate funds, high innovation costs, and a lack of qualified personnel. Innovation barriers can be categorized as market and institutional barriers, team member and organizational attitude barriers, financial and risk barriers, and knowledge and cooperation barriers. Active innovation resistance and passive innovation resistance are characteristic of the individual level.	[20] [30] [31]
Challenges	Companies need to implement effective strategies to overcome challenges in product innovation management. This includes understanding consumer behaviour, developing products responsive to market needs, and good communication strategies. Intuitive product design and consumer education are also essential to increase acceptance of Innovation. An integrated approach between product design, marketing presentation, and continuous research is necessary for companies to attract consumers' attention and meet their needs in a competitive market.	[32] [33] [34]

3. Research Methods

This article uses a qualitative research method with a historical approach. This approach finds developments and trends or maps research on innovative products. This research was conducted in two stages. The first stage is the systematic collection of information. Information from this research is articles that have been published in reputable international journals.
The second stage is to analyze the collected articles using bibliometric analysis. Bibliometric analysis analyzes and systematizes data in words or wording derived from the titles and abstracts of published articles. This analysis helps develop, trend, or map the latest innovative research products so that the research results also help provide recommendations for research themes or variables for future researchers.

3.1. Collecting Data Method

The data collection consisted of research articles from a group of leading journal publishers: 1) Emerald, 2) Springer, 3) Elsevier, and 4) Sagepub. Articles were collected from accessible databases of the four journal publishing groups.
Search for articles using Publish or Perish (PoP). This software helps find articles with relevant research topics. The data collection stages are as follows:

1. The search is limited to the years 1975-2024
2. The keyword used as search criteria is ['Product']
3. The combination of keywords used as search criteria consists of two combinations. The first combination ["Goods; services; events; experiences; people"]. The second combination ["Place", "Ownership", Organization", 'Information', 'Idea'].
4. Next, the research collected by the software was reduced based on journals written in English. Source articles from reputable journals.
5. The search was limited to journal articles in the scientific fields of management, business, economics, social, information, and entrepreneurship. This study's data did not include conference proceedings, meeting results, or books.
6. Articles to be analyzed were checked for research completeness regarding the presence of "title", "abstract", and "keywords".
7. The completeness that needs to be considered in selecting articles to be processed is DOI, publishing journal, publisher, article URL, Number of citations, GS Ranking, CitesPerYear, CitesPerAuthor, and AuthorCount.Data Analysis Method.

Articles collected from searches using Publish or Perish from 1975 to 2024 totalled 468 articles with a combination of search titles and keywords, as shown in Table 3.

Table 3. Search Combinations and Number of Articles Generated

Title	Keyword	Number
["Product"]	Goods, Services, Events, Experiences, People.	399 Articles
["Product"]	Places, Possessions, Organizations, Information, Ideas.	70 Articles

3.2. Analysis Data Method

Bibliometric analysis using the VOSviewer application. The study showed a map of innovative bibliographic products. The resulting bibliometric analysis is a map of bibliographic data and text data extracted from the titles and abstracts of selected articles.

The results of the analysis are used to map and develop the field of reference studies. Scientific mapping analyzes trends and patterns of scientific research development related to the results of research studies on innovative products.

VOSviewer analyzes published scientific articles. VOSviewer visualizes knowledge development through network visualization and provides cluster labelling. In other words, VOSviewer includes information about research updates and how much research related to this field has been conducted.

The output of VOSviewer displays maps and networks based on co-citation data or keyword maps based on highly detailed keyword co-occurrence and relevance data. The map and keyword network visualizations have different colours for each data cluster. The VOSviewer application displays an overlay network that shows the development of articles over time. The overlay network presents a period (year) where the linkage of each keyword is presented in the form of a network. Based on the visualization of the overlay network, the extent of research progress related to innovative new universal products is known. In addition, there is a density visualization. The density visualization shows the high or low frequency of concepts or constructs used in research.

4. Results And Discussions

4.1. Numbers of Publication Years

The early 1975s witnessed the evolution of the Innovative Product New Universe with the widespread use of advanced technology, creating a new ecosystem for innovative product development. The number continues to grow with the emergence of various digital platforms as channels for public access to recognize and use the latest products. These technological changes drastically altered the industrial landscape, driving the transformation of business management strategies. This condition attracts many researchers' attention to research new product innovation, both as article titles and as keywords in research. The search results showed 467 articles from 1975 to 2024, as shown in Table 4.

Table 4. Numbers of Publication Years from 1975-2024

Year	Publication Years	Year	Publication Years	Year	Publication Years
1975	1	2004	5	2016	24
1977	1	2005	12	2017	24
1989	1	2006	5	2018	34
1990	1	2007	9	2019	35
1992	1	2008	18	2020	23
1996	1	2009	9	2021	47
1998	4	2010	7	2022	40
1999	5	2011	20	2023	30
2000	4	2012	14	2024	13
2001	3	2013	17	Total	467
2002	4	2014	19		
2003	6	2015	30		

Its value shows fluctuations from 2012 to 2015. In this context, research related to product innovation is not very popular. However, in the coming years, this topic has the potential to become very popular.

4.2. Author Analysis

Author analysis using Google Scholar (GS) ranking. GS has the same function as Thomson ISI Web of Knowledge, which produces Journal Impact Factors (JIF). JIF assesses the impact factor of articles [35].GS has an advantage in ranking through access to free articles. Free article access allows researchers to create articles as references, regardless of the financial capabilities of the research institution.

Table 5. Active Publication per Year From 1975-2024

Author's Name	Title	GS Rank
R Wang, F Wang, J Hu (2021)	Intelligent Product Design with Natural Interaction	268
F Wang, Y Wang, Y Han, JH Cho (2024)	Optimizing brand loyalty through user-centric product package design: A study of user experience in the dairy industry	410
Y Wang, DR John, V Griskevicious (2021)	Does the devil wear Prada? Luxury product experiences can affect prosocial behaviour	428
Y Wang, H Tian, E Sarigöllü, W Xu (2020)	Nostalgia prompts sustainable product disposal	445
S Ma, C Zhang, Y Wang (2020)	From service engagement to product purchase: cross-buying behaviour in hospitality contexts	139
Y Wang, DY Mo, HL Ma (2020)	Perception of time in the online product customization process	409
Y Wang, M Zhang, Y Ming (2022)	What contributes to online communities' prosperity? Understanding value co-creation in product-experience-shared communities (PESCs) from the view of resource integration	30
X Gong, H Zhang, X Zhang, Y Wang (2023)	Circular or angular? How Nostalgia Affects Product Shape Preference	467
F Wang, Y Wang, Y Han, JH Cho (2024)	Optimizing brand loyalty through user-centric product package design: A study of user experience in the dairy industry	410
M Zheng, X Ming, L Wang, D Yin, X Zhang (2017)	Status review and future perspectives on the framework of smart product-service ecosystem	179
L Wang, L Chen, C Li (2024)	Research on strategies for improving green product consumption	235
Y Liu, C Li, S McCabe, H Xu (2019)	How do small things affect the big picture? The effect of service product innovation on perceived experience value	25
X Zhou, Y Tan, G Zacharewicz, Y Liu, K Tan, D Chen (2021)	Research on value-based heuristics miner for product service system	363

The GS ranking can be seen from the author's contribution to producing articles each year. Based on the data collected, 10 authors actively write. Table 5 shows the authors' contribution to producing articles annually [35].

4.3. Citation Analysis

Citation analysis shows how many articles are cited or referenced by other researchers. Researchers related to innovative products continue to fluctuate, especially from 2012 to 2015.

Changes in the environment are driving challenges in business management that require Innovation. Business managers, both large companies and SMEs, must be able to adapt to these changes by developing products that are innovative and relevant to this new universe. The increase in adaptation also encourages a high commitment from researchers to continue developing scientific knowledge to provide digital-based business management solutions that can break traditional boundaries and create relevant products in the evolving market. Elsevier is the journal with the highest number of innovative product publications, as shown in Table 6.

Table 6. Top 25 Authors and Articles Cited in Innovative Product

Author's Name	Publisher	Citied Frequency
GL Shostack	Journal Of Marketing	4317
JG Klein, R Ettenson, MD Morris	Journal Of Marketing	2574
A Tukker	Journal Of Cleaner Production	2398
A Tukker	Journal Of Cleaner Production	2395
P Desmet, P Hekkert	International Journal Of Design	2146
M Hassenzahl	Funology 2: From Usability To Enjoyment	2135
JS Gans, S Stern	Research Policy	1903
M Hassenzahl	ACM Digital Library	1371
CB Schoonhoven, KM Eisenhardt, K Lyman	Administrative Science Quarterly	1183
RG Cooper	Journal Of Product Innovation Management	1119
S Nambisan, RA Baron	Journal Of Interactive Marketing	1078
N Hu, L Liu, JJ Zhang	Information Technology And	1067

Author's Name	Publisher	Citied Frequency
	Management	
K Lyytinen, Y Yoo, RJ Boland Jr	Information Systems Journal	982
JA Rosa, JF Porac, J Runser-Spanjol, MS Saxon	Journal Of American Of Marketing Assosiation	892
SJ Hoch	Journal Of Consumer Research	825
AM Benur, B Bramwell	Tourism Management	778
HJ Cheong, MA Morrison	Journal Of Interactive Advertising	711
CM Armstrong, K Niinimäki, S Kujala, E Karell, C Lang	Journal Of Cleaner Production	635
D Getz	Tourism Management	628
T Cooper	Journal Of Consumer Policy	586
KL Hsiao, J Chuan-Chuan Lin, XY Wang, Hsi-Peng Lu	Online Information Review	561
B Bramwell	Tourism Management	531
P Fitzgerald Bone	Advances In Consumer Research	520
P Desmet	The Design Journal	476

4.4. Bibliometric Analysis

Bibliometric analysis helps researchers map and determine the extent of research development related to innovative products. So that research results can identify relevant and current research themes or variables, thus clarifying the potential impact of research if it is developed.

In the Co-authorship analysis, there are authors associated with the names of other authors. This analysis shows that the authors collaborated in researching innovative products, as shown in Figure 1. Wang Y collaborated with other authors. Two research teams did two articles published by Wang Y. Similarly, Zhang X and Wang L have produced two articles published by different author teams.

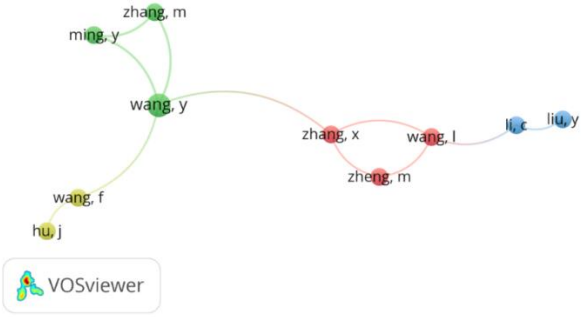

Fig 1. Author Network

The collaboration carried out by the authors shows a high commitment to continue conducting research related to innovative products. Table 7 shows the research titles that conducted the study.

Table 7. Author Collaboration

Author	Title
Y Wang, M Zhang, Y Ming (2022)	What contributes to online communities' prosperity? Understanding value co-creation in product-experience-shared communities (PESCs) from the view of resource integration
F Wang, Y Wang, Y Han, JH Cho (2024)	Optimizing brand loyalty through user-centric product package design: A study of user experience in the dairy industry
R Wang, F Wang, J Hu (2021)	Intelligent Product Design with Natural Interaction
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L Wang, L Chen, C Li (2024)	Research on strategies for improving green product consumption sentiment from the perspective of big data
Y Liu, C Li, S McCabe, H Xu (2019)	How do small things affect the big picture? The effect of service product innovation on perceived experience value

The analysis results with VOS viewer, which performs co-occurrence analysis, found 2,827 keywords related to innovative products. To produce more specific keywords in the title and abstract keywords analysis, the occurrence of keywords is limited to 3. From the limitation of nine occurrences, 51 keywords were obtained, divided into 7 clusters, as shown in Table 8.

Table 8. Keywords Clustering

Cluster	Keyword
Cluster 1	Customer, group, knowledge, location, new idea, new product, new product development, new product idea, owner, ownership, process, product, product development, product information, product innovation, product owner, product owners, product ownership, product service system, structure, title
Cluster 2	Entrepreneurship, experience, future, hand, metaverse, metaverse platform, mixed reality, reality, virtual experience, virtual reality, virtual reality environment
Cluster 3	Book, business, consumer behaviour, entrepreneur, marketing, metaverse experience, nfts, physical reality, virtual reality headset, web3
Cluster 4	Blockchain, vision, web, world
Cluster 5	Consumer, imagination, metaverse world
Cluster 6	Consumer brand
Cluster 7	Workshop

The results of the network visualization analysis show that many small nodes represent the keywords generated from the study, as shown in Figure 2. This visualization shows that there are still many research gaps that exist today. A lot of innovative product-related research is needed to fill these research gaps. For example, the metaverse node "Virtual Reality Headset" is not yet connected to the metaverse model node "Imagination". This research is needed to generate scientific knowledge to understand, explain, and control the product.

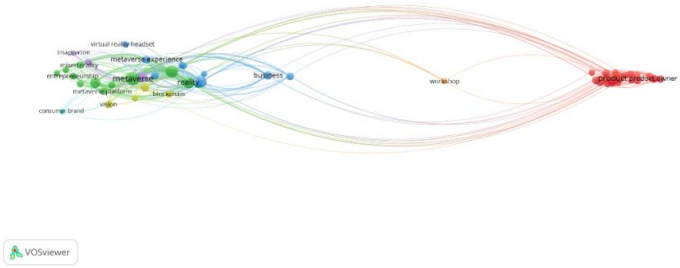

Fig 2. Network Visualization in Innovative Product

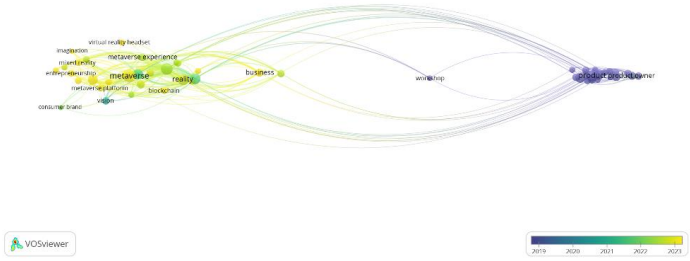

Fig 3. Overlay Visualization in Innovative Product

Figure 3 shows that most themes have a bright yellow node colour. The yellow colour indicates that most of the articles published are around 2023. The results of this analysis can be the basis for the assumption that the themes related to innovative products are the most recent.

Based on the Overlay Visualization, themes related to innovative products are the latest studies. According to previous data, research on innovative products has been significant since 2012.

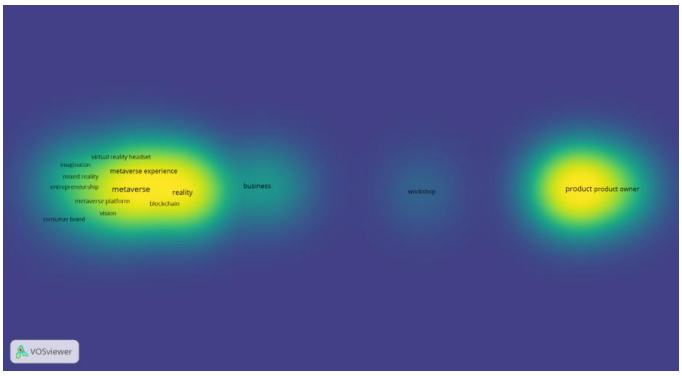

Fig 4. Density Visualization in Innovative Product

Figure 4 shows the distribution of research on product innovation in the Metaverse era. This can be seen from the bright yellow areas that reflect the high density of sub-themes such as "metaverse experience", "reality", and "blockchain". This means that research related to these themes has already been entirely developed. However, other areas with low density, such as "workshop" and "product owner", show that there is still a void of studies in these subthemes. These gaps need to be filled with further research to enrich the discourse and expand the scope of research in the context of product innovation in the Metaverse era.

5. Conclusions

The bibliometric analysis revealed that the scientific mapping of product innovation development still shows a significant research gap. This gap indicates that researchers should conduct further studies on product innovation in the new universe. Some suggested topics or themes for additional research related to product innovation in this "new universe" have been identified.

References

[1] Z. J. Acs and D. B. Audretsch, *Innovation and small firms*. Cambridge: MIT Press, 1990.
[2] Z. Deng, P. S. Hofman, and A. Newman, "Ownership concentration and product innovation in Chinese private SMEs," *Asia Pacific Journal of Management*, vol. 30, no. 3, pp. 717–734, Sep. 2013, doi: 10.1007/s10490-012-9301-0.
[3] J. A. Schumpeter, *Capitalism, Socialism and Democracy* . New York: Harper and Row, 1950.
[4] G. Warnaby and D. Medway, "Rethinking the place product from the perspective of the service-dominant logic of marketing," in *Rethinking Place Branding: Comprehensive Brand Development for Cities and Regions*, Springer International Publishing, 2015, pp. 33–50. doi: 10.1007/978-3-319-12424-7_3.
[5] M. Zhao and X. Wang, "Perception value of product-service systems: Neural effects of service experience and customer knowledge," *Journal of Retailing and Consumer Services*, vol. 62, Sep. 2021, doi: 10.1016/j.jretconser.2021.102617.
[6] K. Demyttenaere, I. Dewit, and A. Jacoby, "The Influence of Ownership on the Sustainable Use of Product-service Systems - A Literature Review," in *Procedia CIRP*, Elsevier B.V., 2016, pp. 180–185. doi: 10.1016/j.procir.2016.03.071.
[7] R. Lacey, A. G. Close, and R. Z. Finney, "The pivotal roles of product knowledge and corporate social responsibility in event sponsorship effectiveness," *J Bus Res*, vol. 63, no. 11, pp. 1222–1228, Nov. 2010, doi: 10.1016/j.jbusres.2009.11.001.
[8] C. Dragin-Jensen *et al*., "Event innovation in times of uncertainty," *International Journal of Event and Festival Management*, vol. 13, no. 4, pp. 387–405, Sep. 2022, doi: 10.1108/IJEFM-07-2021-0063.
[9] G. Mainolfi and V. Marino, "Destination beliefs, event satisfaction and post-visit product receptivity in event marketing. Results from a tourism experience," *J Bus Res*, vol. 116, pp. 699–710, Aug. 2020, doi: 10.1016/j.jbusres.2018.03.001.
[10] J. Etkin and A. Sela, "How Experience Variety Shapes Post-Purchase Product Evaluation."
[11] A. Slavec Gomezel and D. Aleksić, "The relationships between technological turbulence, flow experience, innovation performance and small firm growth," *Journal of Business Economics and Management*, vol. 21, no. 3, pp. 760–782, Apr. 2020, doi: 10.3846/jbem.2020.12280.
[12] M. A. Krąpiec, "Man in the universal encyclopedia of philosophy," *Studia Gilsoniana*, vol. 7, no. 4, pp. 597–664, 2018, doi: 10.26385/SG.070431.
[13] N. Papadopoulos, M. Cleveland, B. Bartikowski, and A. Yaprak, "Of countries, places and product/brand place associations: an inventory of dispositions and issues relating to place image and its effects," *Journal of Product and Brand Management*, vol. 27, no. 7, pp. 735–753, Dec. 2018, doi: 10.1108/JPBM-09-2018-2035.
[14] P. Devine-Wright and S. Clayton, "Introduction to the special issue: Place, identity and environmental behaviour," Sep. 2010. doi: 10.1016/S0272-4944(10)00078-2.
[15] C. Baumeister, A. Scherer, and F. v. Wangenheim, "Branding access offers: the importance of product brands, ownership status, and spillover effects to parent brands," *J Acad Mark Sci*, vol. 43, no. 5, pp. 574–588, Sep. 2015, doi: 10.1007/s11747-015-0440-y.
[16] N. J. Foss, P. G. Klein, L. B. Lien, T. Zellweger, and T. Zenger, "Ownership competence," *Strategic Management Journal*, vol. 42, no. 2, pp. 302–328, Feb. 2021, doi: 10.1002/smj.3222.
[17] Y. Nemoto, K. Uei, T. Fujiwara, S. Mizoguchi, and Y. Shimomura, "Strategic thinking in EDIPS: Edutainment for designing integrated Product-Service System," in *Procedia CIRP*, Elsevier, 2014, pp. 92–97. doi: 10.1016/j.procir.2014.01.012.
[18] M. R. Della Peruta, M. Del Giudice, R. Lombardi, and P. Soto-Acosta, "Open Innovation, Product Development, and Inter-Company Relationships Within Regional Knowledge Clusters," *Journal of the Knowledge Economy*, vol. 9, no. 2, pp. 680–693, Jun. 2018, doi: 10.1007/s13132-016-0356-x.

[19] V. Sundquist and L. Melander, "Mobilizing resources in product development by organizational interfaces across firms, units and functions," *Journal of Business and Industrial Marketing*, vol. 36, no. 2, pp. 307–323, Feb. 2021, doi: 10.1108/JBIM-10-2019-0445.
[20] F. Wijnhoven and J. Kraaijenbrink, "Product-oriented design theory for digital information services: A literature review," *Internet Research*, vol. 18, no. 1, pp. 93–120, 2008, doi: 10.1108/10662240810849612.
[21] J. Freiden, R. Goldsmith, S. Takacs, and C. Hofacker, "Information as a product: Not goods, not services," *Marketing Intelligence & Planning*, vol. 16, no. 3, pp. 210–220, Jun. 1998, doi: 10.1108/02634509810217327.
[22] S. A. Mummah, T. N. Robinson, A. C. King, C. D. Gardner, and S. Sutton, "IDEAS (integrate, design, assess, and share): A framework and toolkit of strategies for the development of more effective digital interventions to change health behavior," *J Med Internet Res*, vol. 18, no. 12, Dec. 2016, doi: 10.2196/jmir.5927.
[23] L. Somers, I. Dewit, and C. Baelus, "Understanding product-service systems in a sharing economy context - A literature review," in *Procedia CIRP*, Elsevier B.V., 2018, pp. 173–178. doi: 10.1016/j.procir.2018.03.317.
[24] T. J. Howard, E. A. Dekoninck, and S. J. Culley, "The use of creative stimuli at early stages of industrial product innovation," *Res Eng Des*, vol. 21, no. 4, pp. 263–274, Oct. 2010, doi: 10.1007/s00163-010-0091-4.
[25] P. Clermont and B. Kamsu-Foguem, "Experience feedback in product lifecycle management," *Comput Ind*, vol. 95, pp. 1–14, Feb. 2018, doi: 10.1016/j.compind.2017.11.002.
[26] P. Nightingale, "A cognitive model of innovation," 1998.
[27] Y. Liu, C. Li, S. McCabe, and H. Xu, "How small things affect the big picture?: The effect of service product innovation on perceived experience value," *International Journal of Contemporary Hospitality Management*, vol. 31, no. 7, pp. 2994–3014, Sep. 2019, doi: 10.1108/IJCHM-10-2017-0655.
[28] M. Lascialfari, M. B. Magrini, and P. Triboulet, "The drivers of product innovations in pulse-based foods: insights from case studies in France, Italy and USA1," *Journal of Innovation Economics and Management*, vol. 1, no. 28, pp. 111–143, 2019, doi: 10.3917/jie.028.0111.
[29] R. J. Slotegraaf and J. J. Inman, "Longitudinal Shifts in the Drivers of Satisfaction with Product Quality: The Role of Attribute Resolvability," 2004.
[30] A. Hartono and R. Kusumawardhani, "Innovation Barriers and Their Impact on Innovation: Evidence from Indonesian Manufacturing Firms," *Global Business Review*, vol. 20, no. 5, pp. 1196–1213, Oct. 2019, doi: 10.1177/0972150918801647.
[31] M. Skippari, M. Laukkanen, and J. Salo, "Cognitive barriers to collaborative innovation generation in supply chain relationships," *Industrial Marketing Management*, vol. 62, pp. 108–117, Apr. 2017, doi: 10.1016/j.indmarman.2016.08.002.
[32] H. Arabshahi and H. Fazlollahtabar, "Risk analysis for innovative activities in production systems using product opportunity gap concept," *TQM Journal*, vol. 31, no. 6, pp. 1028–1048, Nov. 2019, doi: 10.1108/TQM-11-2018-0163.
[33] J. Yoo and M. Kim, "The effects of online product presentation on consumer responses: A mental imagery perspective," *J Bus Res*, vol. 67, no. 11, pp. 2464–2472, 2014, doi: 10.1016/j.jbusres.2014.03.006.
[34] V. S. C. Tunn, E. A. van den Hende, N. M. P. Bocken, and J. P. L. Schoormans, "Digitalized product-service systems: Effects on consumers' attitudes and experiences," *Resour Conserv Recycl*, vol. 162, Nov. 2020, doi: 10.1016/j.resconrec.2020.105045.
[35] A. Setiawan, Moh. Y. Mahadianto, M. Alwi, and B. A. Prasetya, "Mapping The Knowledge Domains of Digital Transformation Publications: A Bibliometric Analysis," 2024, pp. 440–457. doi: 10.2991/978-94-6463-443-3_58.