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DIGITAL BUSINESS MODEL TYPOLOGY: A TAXONOMY AND ANALYSIS OF RESEARCH INTENSITY

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ABSTRACT

The growing number of publications on digital business models has led to a fragmentation of scientific discourse. This study tests the assumption that research intensity is uneven across different areas of the digital business model knowledge field. This requires a quantitative assessment of the field to identify new directions for scientific research. Literature analysis shows that most authors view the digital business model as a reactive system that adapts to the external or internal environment. This study aims to verify this assumption and analyze the extent to which the direct link between processes and business logic remains underrepresented.

The article aims to develop a taxonomy of digital business models by mapping the research field. The methodology is based on a content analysis of theoretical models and their distribution in a single coordinate system using a ternary plot with axes: "Context", "Process", and "Content."

As a result of the quantitative mapping of the research field, four strategic archetypes were identified, reflecting different logics of digital business model formation in the modern economy. Each represents a distinct approach to integrating value creation, organizational processes, and interaction with the external environment. The identification of these archetypes allows for the systematization of the fragmented scientific discourse and the formation of a comprehensive map of strategic benchmarks for digital business model development.

The reliability of the results is ensured by the use of a high-quality scientific sample. The study is based on an intellectual core of publications from leading international journals, representing the most authoritative scientific discussions in the field of digital business models. This approach enabled the formation of a representative picture of the contemporary academic field and ensured the high analytical validity of the findings.

Keywords: digital business models, taxonomy, ternary plot, digital transformation, value creation, business process modeling, strategic management, dynamic capabilities, digital ecosystem

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INTRODUCTION

The digital business model (DBM) is increasingly viewed as a multifaceted architecture where technological infrastructure, market dynamics, and operational processes intersect. As organizations transition toward digital maturity, the complexity of this architecture is intensified, leading to a diverse range of theoretical frameworks.

Preliminary observations suggest that the theoretical field may be developing unevenly, with certain perspectives dominating the discourse while others remain in the periphery. This potential imbalance raises critical questions about the completeness of current DBM theory. If research effort is concentrated only on specific, well-worn paths, the academic field risks overlooking alternative strategic configurations that could be essential for digital success.

To move beyond these preliminary observations, a systematic and quantitative evaluation of the research landscape is required. By visualizing the intellectual structure of the

field through a multi-dimensional lens, the underlying patterns of academic attention can be exposed. Such an analysis serves as the necessary foundation for identifying distinct strategic territories — zones where the philosophy of digital existence is fundamentally redefined.

This approach is intended to reveal the divergent logics that dictate how firms navigate the digital age. By uncovering these diverse trajectories, the discourse is moved from reactive description toward a proactive, architecturally grounded understanding of the strategic landscapes through which digital business is defined.

LITERATURE REVIEW

The current state of research on Digital Business Models (DBM) shows a path of non-linear growth, with a major surge in academic interest starting after 2018. According to data from the OpenAlex database, the number of publications in business, management, and economics grew significantly between 2015 and 2025, reaching a total of 575 peer-reviewed works.

This rapid growth reflects a fundamental shift in the field. The academic community has moved from simply observing digital tools to conducting a comprehensive analysis of how the digital environment changes the core logic of survival and success for modern organizations.

The fundamental works of Alexander Osterwalder, as well as Christoph Zott and Raphael Amit, established the understanding of business models as systemic structures. These structures connect strategic choices with the mechanisms used to generate profit.

In today's digital environment, this understanding has evolved. A Digital Business Model is no longer seen as a static plan, but as a dynamic architecture. It integrates technological infrastructure and market conditions to transform operational processes into economic results. Building on these classic foundations, researchers like Heubeck (2023) and Parida et al. (2019) highlight those dynamic capabilities — specifically the ability to sense, seize, and reconfigure resources — are essential for survival in today's volatile environments and fast technological pace.

One of the most prominent theoretical issues is the "digital paradox". This describes the risk of seeing no profit despite making large investments in digital technologies. According to Parida et al. (2019) and Linde et al. (2021), this situation requires a careful synchronization of all business model components to prevent a "strategic gap".

Researchers suggest that the solution lies in completely redesigning how the company creates and captures value, rather than simply implementing new digital tools.

The Ukrainian academic discourse in this field encompasses a significant body of research, with representative works including Tepliuk et al. (2025), who substantiate the concept of interdependent development of digital business configurations and marketing strategies, where the chosen monetization model directly determines the vectors of communication and sales policy. Another notable example is the study by Repina et al. (2026), dedicated to service-oriented business models and the role of ESG compliance in strengthening enterprise resilience. These works complement global experience by focusing on specific mechanisms for business adaptation to the challenges of the digital economy. At the same time, a detailed analysis of the entire domestic body of work and its comprehensive comparison with global discourse requires a separate review study, which remains a promising direction for further scientific inquiry.

To organize the knowledge field of Digital Business Models, Andrew Pettigrew's 1987 framework was chosen as the theoretical lens. This choice is justified because the framework describes organizational transformation as a "reality in flight", meaning that change is a natural feature rather than a single event. Pettigrew's triad — Content, Context, and Process — helps to bring together fragmented DBM research into a single system of coordinates. In this study, "Content" represents the value architecture, "Context" includes external ecosystems and internal resources, and "Process" explains the mechanisms of moving from digitalization to full transformation.

The analysis of current literature shows that a significant number of scientific works in the field of digital business models focus on how companies adapt to changes in the market, how to manage the internal organizational context, and how to create and capture value by transforming processes according to these factors. For instance, Liu & Xie (2025) define "digital resource bricolage" as a key mechanism linking market orientation with business model. Pakulska & Poniatowska-Jaksch (2022) identify a deep gap between existing technological potential and the actual minimum level of digital business model adoption in the renewable energy sector. Researchers note that even with advanced tools available, many firms stick to traditional production methods, preventing a successful transition to a modern, connected digital system. Nyagadza

(2022) provides a detailed view, conceptualizing transformation as a three-stage process moving through digitization, digitalization, and the total transformation of traditional operations into digital ones.

However, there are recent examples of businesses designing their systems to directly achieve business model results while minimizing dependence on environmental volatility. In this logic, modeling is based on the predicted state of technology several years ahead, providing the company with medium- to long-term sustainability. A clear example of this shift is the digital transformation of Nike under the leadership of Elliott Hill. Facing an 10% revenue drop and a 13% decline in direct digital sales in late 2024 (Nike, Inc., 2025), the company moved away from short-term "fixes." Instead, it initiated a large-scale restructuring aimed at dominating generative AI.

Nike's strategic move involves shifting from traditional marketing to building "digital authority" within knowledge synthesis systems like AEO and GEO. From a management perspective, this represents a transition from reactive management to modeling an operational foundation aligned with the projected technological progress of the 2030 market. In this future, primary competition will focus not on advertising placement, but on the right to be "cited" (Aggarwal et al., 2024). This allows the organization to reduce its dependence on the immediate environment and become an active architect of its future operational efficiency. Thus, the Nike case illustrates how the "Process-Content" link in the Ternary Plot is filled, as transformation processes are designed as a direct path to long-term value extraction.

Despite the growing volume of literature, the research landscape remains unevenly distributed across the Content-Context-Process triad. While many studies focus on how companies react to their environment, other strategic configurations receive much less attention. Identifying general research streams helps to organize the theoretical field and highlights the 'quiet zones' where academic intensity is low. This approach provides a starting point for exploring less-studied business model configurations that may lead to greater digital efficiency.

AIMS AND OBJECTIVES

The primary purpose of this research is to establish a comprehensive taxonomy of digital business models by quantitatively mapping the academic landscape. This approach is intended not only to categorize existing research streams but also to identify structural imbalances and "quiet zones" that remain underexplored in the current discourse.

To achieve this purpose, the following objectives were established:

1. To extract and process a representative dataset of peer-reviewed works from the OpenAlex database to capture the current state of DBM discourse.
2. To test the assumption that current literature is predominantly focused on reactive, context-mediated models rather than proactive operational design.
3. To categorize the identified research streams into distinct archetypes based on the content-context-process triad.
4. To visualize research intensity using a ternary plot to pinpoint specific knowledge gaps and areas for future scientific inquiry.

METHODS

This study builds on the findings of a preliminary Systematic Literature Review conducted to identify the core theoretical pillars of Digital Business Models (DBM).

In the initial stage, a dataset of 575 works published between 2015 and 2025 was extracted from the OpenAlex global database. The search was conducted using the keyword phrase "digital business model" and filtered by the subject areas of "Business, Management & Accounting" and "Economics, Econometrics & Finance". This broad scope made it possible to capture the full range of publication activity in the most relevant disciplines for this study.

During a multi-stage filtering process, an "intellectual core" was selected from the main dataset. This core consists of articles published in journals ranked in the first and second quartiles. This restriction ensured the high scientific quality of the data, as the concepts were subjected to a rigorous peer-review process in the most prestigious journals in the field. At this stage, an Open Access filter was also applied to ensure that full-text versions were available for in-depth analysis.

The final results underwent content filtering through a manual review of abstracts and keywords. During this procedure, articles were excluded if the topic of digital business models was mentioned only contextually or served as a secondary

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example without deep theoretical development. This approach allowed the focus to remain exclusively on works that make a significant contribution to the design and development of Digital Business Model theory.

As a result, the final scope of the study consisted of 47 highly cited articles. This selection represents a representative cross-section of global academic thought and serves as the foundation for developing a taxonomy and identifying the structural imbalance in the current field of knowledge.

To analyze the intellectual structure of these papers, Computer-Aided Text Analysis was utilized. During the preprocessing stage, all 47 full-text documents were converted into a machine-readable format. References, publisher metadata, author information, and technical headers or footers were excluded from the text. This resulted in a "clean" dataset consisting only of the authors' arguments and scientific conclusions. To improve the accuracy of the analysis, lemmatization and stop-word removal were applied, helping to focus on core semantic concepts rather than grammatical structures.

Each article was divided into three functional segments. The title and keywords represent the primary focus declared by the authors, while the abstract and conclusion contain the core findings and conceptual contributions, and the main body includes the detailed arguments and analysis, excluding the bibliography.

The 18 key concepts used for analysis were identified using VOSviewer software (Van Eck & Waltman, 2010) to ensure an objective and data-driven selection process. This specific number was determined by setting a minimum occurrence threshold and selecting terms with the highest total link strength, which ensured that only the most influential and interconnected nodes of the research field were included. These concepts represent the "semantic backbone" of the discourse as they consistently appear across diverse theoretical perspectives and demonstrate high centrality within the literature network.

The categorization of these concepts into the three dimensions of Pettigrew's framework was empirically grounded in the clustering analysis performed by the software. VOSviewer's algorithm automatically grouped the keywords into distinct color-coded clusters based on the strength of their co-occurrence. These clusters revealed the natural thematic structure of the field, where terms that are conceptually and contextually linked appear together in the literature.

The mapping of these empirical clusters onto the theoretical axes of the Content-Context-Process triad was based on the functional alignment of the terms within each group. The Content dimension was derived from a cluster that predominantly featured elements of value architecture, such as Business model, Revenue model, and Value creation. The Process dimension was justified by a specific cluster where mechanisms of change, including Digital transformation and Business process modeling, showed high proximity and shared links.

The Context dimension was formed by clusters representing the environment and strategic assets, which allowed for a logical subdivision into external factors and internal strategic resources. To maintain analytical rigor, a manual normalization process was applied where synonyms such as "e-commerce" and "electronic business" were consolidated into a single conceptual unit. This two-step approach — using VOSviewer for data-driven cluster identification and Pettigrew's framework for theoretical labeling — ensures that the resulting taxonomy is both mathematically robust and conceptually sound.

To differentiate between the primary research intent and secondary contextual mentions, a weighted scoring system was implemented. This approach aligns with established content analysis standards (Krippendorff, 2018), which suggest that the prominence and location of a concept are more reliable indicators of significance than simple raw frequency. Mentions within the title and keywords were assigned a weight of 10, as they represent the authors' explicitly declared strategic focus and the paper's indexed identity. A weight of 5 was applied to the abstract and conclusion, which serve as the conceptual core and summarize the primary findings. Finally, mentions in the main body were assigned a weight of 1 to reflect their role in providing supporting evidence and detailed argumentation. This hierarchy prevents "thematic noise" from auxiliary examples in the text from overshadowing the core theoretical contributions. The final score for each dimension was calculated as a cumulative sum of these weighted mentions across all three functional segments.

The exclusion of the concept "Business Model" from the final calculation was performed to ensure statistical accuracy. Since this term served as the primary keyword for the initial article's selection, it appeared in nearly every title and abstract. This adjustment was made to maintain discriminant validity and allowed the analysis to reveal the actual specialization of the research, effectively distinguishing between papers that focus on value architecture and those that are centered on transformation processes or strategic context.

To visualize the research landscape, the scores were normalized so that the sum of the three coordinates for each paper equaled 100%. The formula used for the Content (C) coordinate is calculated as follows:

$$C_{norm} = \frac{Score_C}{Score_C + Score_{Ct} + Score_P}.$$

The same logic was applied to calculate the Context (Ct) and Process (P) coordinates. This normalization process enabled the creation of a Ternary Plot. This visual map transforms qualitative text data into a clear configuration, making it possible to identify the research structure and potential gaps in the current Digital Business Model field of knowledge.

The use of analysis allowed for the construction of a visual semantic map for each functional segment. Through the analysis of connection density between terms, stable conceptual clusters were identified, which formed the basis of the future taxonomy.

RESULTS

To visualize the field's intellectual structure and identify dominant research strategies, the results of a weighted analysis of 47 articles (Appendix A) were plotted on a ternary graph. The positioning of each work within the triangular coordinate system is determined by the proportional ratio of scores across the three axes of Pettigrew's triad: Content (C), Context (A), and Process (B). This method allows for the simultaneous evaluation of each dimension's contribution to the overall research architecture and the visual recording of their degree of integration. The distribution of research works on the graph reveals clear concentrations of academic attention and structural gaps, which are indicative of the uneven development of the theoretical framework for digital business models.

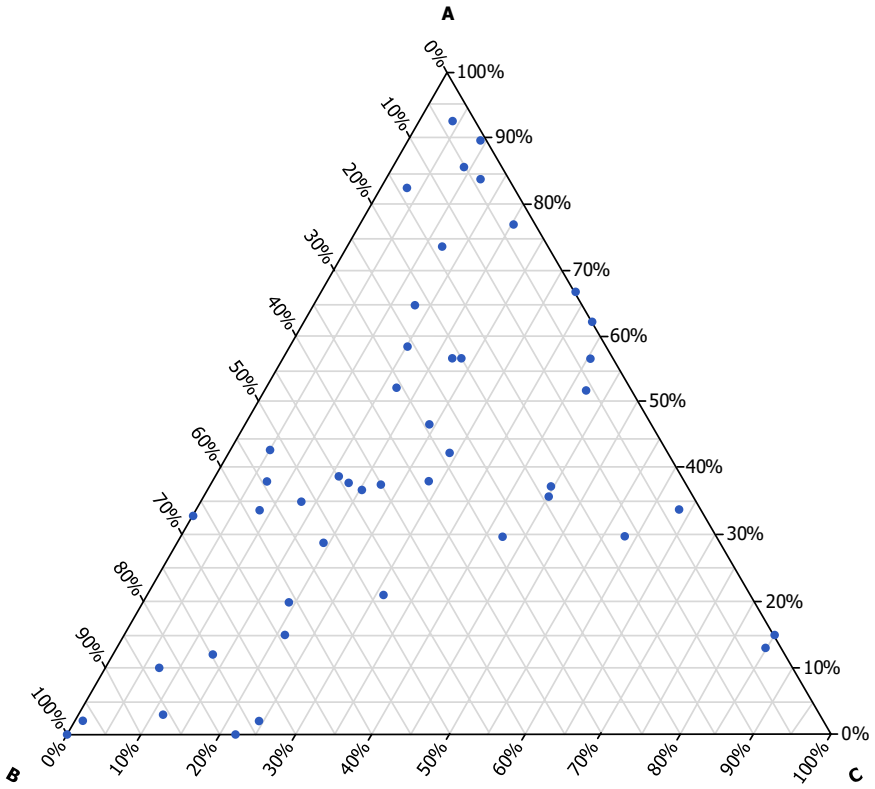

Figure 1. Ternary Plot analysis of Digital Business model knowledge field by the end of 2025.

A significant density of articles is observed in the upper section of the plot, which represents the Context-dominant zone. This distribution demonstrates a prevailing academic orientation toward environmental factors and internal dynamic capabilities as the primary drivers of digital business models. Based on this structure, it is evident that the current literature focuses predominantly on the strategic alignment of the firm with market pressures and internal resource constraints.

The distribution also indicates a clear secondary concentration along the left side of the plot. Research in this area is characterized by an emphasis on the operational implementation and the processual shifts required for digital transition. These studies analyze transformation as a multi-stage progression from digitisation to full operational efficiency. In contrast, the bottom axis of the configuration, representing the direct relationship between Process and Content, remains the least populated area.

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While the distribution identifies the concentration of research efforts, the internal logic of these concentrations is further explored through the identification of four distinct research archetypes (Table 1).

Table 1. Taxonomy of research archetypes in the digital business model field.

Archetype	Triangle Coordinate	Dominant Concepts	Research Position
Architects of Value	Content	Revenue model, Value capture, Value creation, Industry 4.0	The model is viewed mostly as a static structure focused on monetization logic
The Ecosystem Navigator	Context	Digital ecosystem, Big data, Strategic management, Digital economy	The model is viewed mostly as an open system defined by external links and data
Dynamic Integrators	Central Zone	Dynamic capabilities, Competitive advantage, Artificial intelligence	The model is viewed as a balance requiring the synchronization of processes
Navigators of Transformation	Process	Digital transformation, Business process modeling, Electronic business	The model is viewed mostly as a dynamic object with a focus on transition stages

Architects of Value

Within this archetype, the primary research focus is centered on the system "design", where technological components are viewed as internal structural elements that define the logic of value creation and capture. In this configuration, a systematic shift is observed from one-time sales toward the trading of specific performance outcomes. A fundamental transition from traditional goods sales models (CAPEX) to operating expense logic (OPEX) is established in the high-content research of Mancuso et al. (2023) and Aversa et al. (2019).

This transformation is implemented through SaaS mechanisms, pay-per-use systems, and various subscription services that provide companies with stable, recurring revenue. Through the deep integration of IoT sensors, products are transformed into "smart" and "connected" entities. As highlighted by Vendrell-Herrero et al. (2018), this enables the manufacturer not only to deliver goods but also to maintain control over their entire lifecycle, offering additional services and optimization based on real-time data.

In this archetype, traditional linear supply chains are replaced by complex value architectures where the digital platform is integrated as a core structural component. Within this framework, revenue is generated through the internal efficiency of the value system and the significant reduction of transaction costs. In such a configuration, value is created through the seamless integration of technology and service, with the firm acting as the architect of the value system rather than a mere supplier.

By following the logic of this research stream, return on capital is increased, and market resilience is strengthened. Through the transition to a service model supported by digital infrastructure, not only are revenue streams diversified, but a customer "lock-in" effect is also created due to high service personalization. An increase in profit over the product's entire life cycle is ensured by such an architecture compared to the classic transactional model, as technological superiority is transformed into a long-term financial advantage.

The Ecosystem Navigator

In this archetype, the focus is shifted from the structure of a specific company to the external environment, which dictates the rules of the game. Within this research stream, the digital business model is viewed as a system that cannot exist in isolation. Its success is directly dependent on integration into a digital ecosystem. Network effects, external data management, and the influence of global platforms are identified as the primary themes. It is emphasized by researchers that in the digital economy, firm boundaries are blurred, and value is created not within the company itself, but through interaction with numerous external partners.

The philosophy of this research stream is built upon the concept of network orchestration. In the works of Franco et al. (2021) and Trabucchi and Buganza (2019), the business model is described as a coordination mechanism. The company ceases to produce everything independently, and the resources of partners, IT providers, and even competitors are utilized. The ability to derive benefit from "network effects" is considered a vital factor, where the value of the firm's offering is increased proportionally to the number of participants in the common network. Within this logic, the business model is viewed as a way to integrate into external platforms or to create one's own, whereby external connections are transformed into the primary source of profit.

Particular significance is attributed to external barriers and regulatory rules within this stream. It is documented in research that digital models are critically dependent on data protection laws (GDPR), state standards, and environmental regulations. Digital business model is viewed not merely as a means of generating profit but as a tool for the circular economy. This implies that social responsibility and the environmental footprint must be integrated into the business model to maintain legitimacy and receive support from both the state and investors.

Ultimately, accelerated growth is facilitated by this approach through risk sharing and the utilization of shared infrastructure. Capital profitability is maintained through ecosystem participation, as the necessity to invest substantial funds into developing a full technology stack from scratch is eliminated. Instead, technology and data can be "leased" from partners. Long-term business sustainability is achieved by establishing strategic links that transform the company's model into an essential and irreplaceable component of the broader digital landscape.

Dynamic Integrators

Within this archetype, the research focus is shifted from the external "blueprint" of the business to its internal "firmware." This stream unites works where the success of the digital business model is determined by the company's organizational capabilities and its readiness for change. The company is viewed by researchers as a living organism, the viability of which is defined by the speed of information processing and the flexibility of existing assets.

The philosophy of this direction is built on the triad of sensing opportunities, seizing them, and the subsequent reconfiguration of resources. In the works of Soluk (2022) and Trischler et al. (2023), the digital business model is presented as the result of a constant strategic maneuver. Management's "cognitive readiness" is recognized as one of the most prominent success factors: the mental models of leadership determine how effectively new technological solutions will be integrated into the firm's operations. Within this logic, digital tools are viewed as an internal resource that strengthens the company's ability to make decisions more rapidly under conditions of uncertainty.

Particular attention is paid to the management of "asset legacy" — physical assets and established processes. Business success is determined by the ability to balance the exploitation of traditional resources with the implementation of radical digital innovations. The attributes of "digital resilience" and organizational "agility" indicate that, within this logic, the business model is viewed primarily as the ability to rapidly reconfigure teams and budgets in response to new market demands. Competitive advantage is derived not from the ownership of unique equipment, but from the ability to combine employee expertise with data analytics.

Ultimately, the preservation of profitability is facilitated by this approach, even under conditions of market instability. The waste of resources on inefficient projects is prevented through timely restructuring, which also allows for the accelerated identification of new revenue streams. It is demonstrated by research that in the digital landscape, success is achieved not by the largest entities, but by those who adapt most rapidly to change.

Navigators of Transformation

In this archetype, the study of digital business models is shifted from the realm of plans and resources to the realm of actual movement. A central place is occupied by the concept of digital transformation, which is viewed as a continuous process of qualitative business renewal. This movement is described by researchers Saura et al. (2023), Linde et al. (2021), and Mäki and Toivola (2021) through a three-phase logic: from simple data digitization to the modification of individual processes and, ultimately, to a complete restructuring of how value is created by the company. Here, the business model is perceived not as a static framework, but as a constant trajectory of development.

The philosophy of this direction is built upon the principles of Agile and an experimental approach. It is emphasized in the works of Saura et al. (2023) that, under conditions of uncertainty, long-term planning is replaced by rapid hypothesis testing and iterative prototyping. Within this framework, a trial-and-error method is employed by companies, where the business model is constantly adjusted based on market feedback. "Phygital Integration" is regarded as a vital element, where physical and digital interaction channels are merged into a single seamless experience. Through this integration, organizational flexibility and a high response rate to any fluctuations in demand are maintained.

Particular attention is paid to bridging the gap between theory and practice. It is documented in research that the success of transformation is determined by the company's ability to recombine existing resources and integrate new digital routines into the daily work of employees.

The transition from content ownership to licensed access, or from the production of goods to a software-based model, is required not only through new technologies but also through a complete restructuring of operational logic. Within this

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logic, transformation is viewed as a scaling tool, whereby business growth is achieved without a proportional increase in headcount or physical assets.

Capital profitability is protected through a focus on processes, specifically via operational efficiency and speed. The "digitalization paradox" — a phenomenon where massive technology investments fail to generate profit — is avoided through a properly structured transformation.

Costs are reduced, and the accuracy of decisions is enhanced by means of automation and the utilization of real-time data. Long-term success in this context is determined not by the capacity of purchased technologies, but by the velocity with which these technologies are converted into viable market solutions.

Identification of a Dominant Meta-logic

The analysis of this landscape identifies a dominant meta-logic within the analyzed literature. This meta-logic is characterized by a linear sequential progression where the establishment of a value architecture (Content) is consistently followed by its interaction with the requirements and constraints of the external and internal environment (Context). The data suggests that the business processes modeling (Process) is subsequently positioned as a mechanism to adapt to these contextual factors.

This sequence creates a configuration where the operational model is aligned with the previously identified environmental limitations. Such meta-logic positions the environment as a mandatory mediator between business design and economic results. This may explain the thematic scarcity along the bottom axis between the Process and Content corners. The density of research points in this area is at a relatively low level, which serves as mathematical evidence of a knowledge void. This thematic scarcity indicates that current academic discourse rarely explores a direct, unmediated relationship between process and content, as the identified meta-logic inherently directs research toward contextual adaptation.

The lack of proactive planning is caused by high uncertainty and the fear of taking risks. For most managers, it feels much safer to change only when they are forced to by outside pressures — such as a competitor's move, new laws, or a global crisis. It is much harder for them to justify big changes based only on the company's own desire to use new technology.

This creates a paradox: companies declare they want to be digital leaders, but their actual behavior is "defensive." Instead of trying to shape the market with new ideas, they just react to what is happening around them. As a result, they see the market as a fixed set of rules they must follow, rather than a flexible space that they can change through innovation.

Within this zone of thematic scarcity, a few pivotal studies demonstrate a shift toward a more direct link between business processes modeling and value logic. Gavrila and de Lucas Ancillo (2021) exemplify this by proposing cloud-based e-receipts as a proactive tool to bypass traditional technological constraints in offline retail. Similarly, Linde et al. (2021) introduce a three-phase evaluation framework that incorporates financial modelling to preemptively navigate digitalization traps, and Bouncken et al. (2021) suggest a portfolio matrix to manage the integration of new digital business models. While these studies represent important examples of proactive operational design, they appear as emerging signals rather than a consolidated research stream in the Digital Business Models knowledge field. Consequently, the results indicate a concentration of research effort toward context-mediated models, suggesting that direct proactive design remains a less-explored yet promising area.

DISCUSSION

The results of this study provide a structural map of the Digital Business Model research landscape, offering a quantitative confirmation of several qualitative trends identified in previous literature. Traditional reviews in the field of DBM, such as those by Zott and Amit (2010) or Osterwalder (2010), have primarily focused on defining the components of value architecture from a static, descriptive perspective. While recent studies by Nyagadza (2022) and Heubeck (2023) have moved toward a more process-oriented view, they remain largely qualitative. In contrast, this study introduces a quantitative, weighted semantic analysis that moves the discourse from subjective interpretation to objective mapping.

The primary scientific novelty lies in the application of the Ternary Plot to visualize research intensity across the Pettigrew triad. This study offers a novel empirical application of Pettigrew's triad, providing a unique visualization of research distribution through a ternary plot. The identification of the dominant meta-logic offers a complementary perspective on the 'digitalization paradox' described by Parida et al. (2019). It is suggested that the lack of profitability in digital investments may be driven not only by technical or operational constraints but also by a pervasive reactive strategic bias, often manifesting as the uncritical mimicry of prevailing market trends. While technical factors such as insufficient digital skills

or legacy infrastructure are undeniably significant, this research highlights how a focus on reactive adaptation, where organizations reflexively copy competitors' digital tools without internal strategic alignment, may limit their ability to proactively design high-value digital architectures.

The taxonomy established in this research transcends the resource-centric view of Liu and Xie (2025) by introducing a broader structural perspective. While their findings highlight the importance of digital resource bricolage as the creative assembly of available tools, this classification system integrates the critical dimensions of organizational processes and strategic context.

Contribution to Science

This research contributes to the field by providing a methodological approach for identifying theoretical imbalances in Digital Business Model discourse. By utilizing the Ternary Plot to visualize research intensity along the "Process-Content" axis, this study provides empirical evidence of the least populated research area regarding proactive operational design. It shifts the focus from how firms merely react to digital disruption toward an understanding of how they can architect their own technological future.

Limitations of the Study

Despite the systematic approach, this study has certain limitations. First, the selection of the "intellectual core" was restricted to high-impact journals ranked in the first and second quartiles. While this ensures high scientific quality, it may have inadvertently marginalized emerging perspectives from regional scientific schools that are not yet fully reflected in Q1/Q2 global rankings. Second, the areas of low research intensity identified in late 2025 may become rapidly populated. This suggests that the mapping model requires continuous updates to remain relevant in a rapidly shifting digital landscape.

CONCLUSIONS

The establishment of a comprehensive taxonomy provides a foundational framework that enables a transition from isolated case studies toward a systemic understanding of digital business model research streams. By transforming a fragmented theoretical landscape into a structured system of coordinates, this research provides an analytical lens for identifying established strategic patterns and detecting structural imbalances in the digital business model discourse.

Analysis of the identified intellectual core confirms that the current discourse is dominated by a reactive, context-mediated logic. This paradigm suggests that digital transformation is largely treated as a response to external or internal signals, reflecting a reality where organizations adapt to changes that have already occurred. Such a structural explanation for the digitalization paradox highlights why technical investments often fail to yield proactive value without a fundamental shift in strategic orientation.

The developed taxonomy, encompassing the archetypes of Architects of Value, Ecosystem Navigators, Dynamic Integrators, and Navigators of Transformation, accounts for the interplay between organizational processes and strategic context. Empirical visualization through a ternary plot reveals a significant structural imbalance, specifically pinpointing the Process-Content axis as the area of lowest research intensity. This identification of the least populated research area underscores the limited academic focus on proactive operational design, which remains a rare strategic practice primarily found among technological leaders.

Prospects for Future Research

Subsequent scientific inquiry should focus on the empirical validation of the proposed taxonomy across various organizational contexts. The development of integrated assessment methodologies will enable the identification of structural misalignments within business models, facilitating a strategic transition toward proactive operational design.

ADDITIONAL INFORMATION

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Conceptualization: *Viktor Mietolkin, Mariia Tepliuk*

Data curation: *Viktor Mietolkin*

Methodology: *Viktor Mietolkin*

Software: *Viktor Mietolkin*

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Validation: *Mariia Tepliuk*
Investigation: *Viktor Mietolkin*
Visualization: *Viktor Mietolkin*
Writing – review & editing: *Mariia Tepliuk*
Writing – original draft: *Viktor Mietolkin*

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Viktor Mietolkin is an employee of BSH Home Appliances. However, this research was conducted independently. The company had no role in the study design, data collection, analysis, or the decision to publish.

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ТИПОЛОГІЯ ЦИФРОВИХ БІЗНЕС-МОДЕЛЕЙ: ТАКСОНОМІЯ ТА АНАЛІЗ НАСИЧЕНОСТІ ДОСЛІДЖЕНЬ

Зростання кількості публікацій про цифрові бізнес-моделі призвело до фрагментації наукового дискурсу, де розрізнені кейси часто приховують системні закономірності. Це дослідження перевіряє припущення про те, що насиченість досліджень є нерівномірною в різних напрямах знань про цифрові бізнес-моделі. Це потребує кількісної оцінки поля для визначення нових напрямів наукових досліджень. Аналіз літератури свідчить, що велика кількість авторів розглядає цифрову бізнес-модель як реактивну систему, яка адаптується до зовнішнього або внутрішнього середовища. Дослідження спрямоване на верифікацію цього припущення та аналіз того, якою мірою прямий зв'язок між процесами й бізнес-логікою залишається поза увагою дослідників. Дослідження має на меті розробити таксономію цифрових бізнес-моделей шляхом картографування дослідницького поля. Методологія базується на контент-аналізі теоретичних моделей та їх розподілі в єдиній системі координат за допомогою тернарного графіка з осями: «Контекст», «Процес» і «Контент».

У результаті кількісного картографування дослідницького поля було виявлено чотири стратегічні архетипи, що відображають різні логіки формування цифрових бізнес-моделей у сучасній економіці. Кожен із них репрезентує окремий підхід до поєднання створення цінності, організаційних процесів і взаємодії із зовнішнім середовищем. Ідентифікація цих архетипів дозволяє систематизувати фрагментований науковий дискурс і сформувати цілісну карту стратегічних орієнтирів розвитку цифрових бізнес-моделей.

Надійність отриманих результатів забезпечена використанням високоякісної наукової вибірки. Дослідження базується на інтелектуальному ядрі публікацій із провідних міжнародних журналів, що представляють найбільш авторитетні наукові дискусії в царині цифрових бізнес-моделей. Такий підхід дозволив сформувати репрезентативну картину сучасного академічного поля та забезпечив високу аналітичну валідність отриманих висновків.

Ключові слова: цифрові бізнес-моделі, таксономія, тернарний аналіз, цифрова трансформація, створення цінності, моделювання бізнес-процесів, стратегічне управління, динамічні спроможності, цифрова екосистема

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