

The Evolution of Business Models in Response to Global Competitive Pressures

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Abstract

The ever-faster process of globalization has produced drastic alterations in the classical business model framework and forced organizations operating in any industry to implement radical shifts in their strategies. The current research attempts to examine the influence of competition processes in the global environment on business models transformations. In particular, the focus will be placed on examining the processes of digitization, platforms, and value chain restructuring. For the purpose of empirical testing of the hypothesis suggested, a unique research methodology combining qualitative and quantitative methods has been used based on surveying 320 multinational corporations from 18 industrial segments (2015-2024) and conducting interviews with 42 executives. According to the results obtained, companies operating in competitive industries are 2.7 times more likely to involve platform-based approaches than organizations facing relatively weak competition. Moreover, according to the results of the conducted research, the relationship between expenditure on the digital transformation and resilience of a business model is positively correlated ($r = 0.74$, $p < 0.001$). There are three major directions for evolution: (i) digitalization-driven disruption, (ii) ecosystem orchestration, and (iii) value chain internalization. Results of regression analysis indicate that innovation potential, market freedom, and institutional quality are key factors behind effective adaptation. In addition to contributing new knowledge by means of a theoretical framework namely the Competitive Pressure-Innovation Response (CPIR) model—the paper adds to previous contributions like Porter's Five Forces, Business Model Canvas, and Dynamic Capabilities theory.

Keywords: Business Model Evolution; Global Competitive Pressures; Digital Transformation; Platform Ecosystems; Dynamic Capabilities; Value-Chain Reconfiguration; Innovation Management.

I. INTRODUCTION

Indeed, the world of business has been undergoing revolutionary change in the last decade through the impact of disruption through technology, liberalization in international trade, and changes in consumer preferences (Hopkinson et al., 2018; Rahman & Thelen, 2019; Crick & Crick, 2020). Linear business models that used to provide competitive advantages are becoming increasingly unworkable due to digital disruptions in the value chain as well as disruptive new entrants using digitalized business systems (Nosratabadi et al., 2019). In this context, according to the World Economic Forum (2023), more than 60% of Fortune 500 firms have undergone a

significant change in their business models since 2015 in response to the global pressures imposed on them (Gregurec et al., 2021).

Competitive pressures have long been seen as an important trigger for change in strategic management. Yet, the scope and speed, not to mention the multidimensionality, of global pressures facing firms today is something altogether different from what has been captured by theory up to now (Mouakhar & Tellier, 2017).

Although there is an abundance of literature available on business model innovation and competitive strategy, there still exists a major gap in terms of understanding the mechanisms that help bring about change in business models due to global competition pressure (Tallman et al., 2018; Lee et al., 2019). There is a lack of research studies focusing on different sectors or regions or longitudinal in nature that cover more than one cycle of competition. Moreover, the role of institutional context, as a moderating variable, is not explored thoroughly. Therefore, the present paper intends to bridge this gap.

The research aims at accomplishing four major research objectives:

1. RO1: An investigation into the character and strength of competitive forces operating on multinational corporations within chosen industry sectors (2015-2024).
2. RO2: The determination and categorization of prevailing trends of business model change driven by such competitive forces.
3. RO3: An investigation of the connection between competitiveness and the pace and degree of business model adaptation.
4. RO4: Formulating a Strategic Business Model Adaptation Framework (SBMAF).

The study will be directed based on the below-stated research questions:

- RQ1: How does the degree of competition pressure in the global business environment affect the extent and nature of innovation of the business models in multinational corporations?
- RQ2: What are the important factors for enabling or inhibiting business model adaptation?
- RQ3: How much does digital transformation affect the connection between competition and business model resilience?

The following hypotheses have been postulated:

H1: Higher global competition intensity is positively correlated with the occurrence of business model innovation.

H2: Investment in digital transformation moderates the influence of competitive pressure on the adaptability of business models.

H3: Companies that choose platform and subscription business models achieve better financial results during periods of competitive pressure.

H4: Institutional quality (regulatory climate and market openness) positively moderates the effect of competitive pressure on business model change.

H5: Dynamic capabilities (sensing, seizing, and reconfiguring) moderate the influence of competitive pressure on business model change success.

The present paper contributes to existing knowledge in three major ways. First, the paper develops a novel theoretical framework called Competitive Pressure-Innovation Response (CPIR) model, which combines the following theories: Porter's Five Forces, the Business Model Canvas, and Dynamic Capabilities Theory. Second, the research delivers solid empirical support based on 18 industries and 42 nations, overcoming the methodological deficiencies of previous sector- and country-specific studies. Finally, this work presents practical advice to both managers dealing with competitive turbulence and policy makers seeking to build institutions fostering adaptive capabilities of national industries.

The rest of the paper is structured in the following manner: In Section 2, a thorough literature review is discussed to give an insight into important theoretical and empirical contributions. In Section 3, the methodology employed in the study is described, including data gathering and analysis approaches, along with the SBMAF framework. The findings and discussions from the empirical tests are reported in Section 4. The final section includes the concluding remarks on the study.

II. LITERATURE REVIEW

The definition of the business model has shifted drastically since its early definition as a financial rationale for profit creation, to newer definitions that encompass aspects of value creation, value delivery, and value capture (Saebi et al., 2017; Pedersen et al., 2018; Roome & Louche, 2016). The business model is an activity system where a firm's interrelated activities play a pivotal role (Hopkinson et al., 2018). In their famous Business Model Canvas (BMC), it provides a popularly followed nine-component framework that is commonly used as a lingua franca across both practitioners and academics. More recently, a classification of the business model into three conceptual views: the attribute view as pertaining to real firms, the linguistic view as pertaining to cognitive schemas and languages, and the conceptual view pertaining to the conceptual schema of business models.

The Dynamic Capabilities Theory states that a firm can obtain sustainable competitive advantage only if it can perceive new opportunities and capture value creation possibilities while restructuring its resource base (Zollo et al., 2016; Schaltegger et al., 2016; Nosratabadi et al., 2019). The theory offers an excellent explanation as regards how companies evolve their models in order to stay competitive (Shahri et al., 2023; Schaltegger et al., 2016; Gregurec et al., 2021). In addition, a contribution to the theory by stating that dynamic capabilities should be regarded as unique strategic processes by which organizations integrate and coordinate their competencies (Zollo et al., 2016). Finally, the notion was complemented and differentiated between ordinary capabilities and dynamic capabilities.

The Five Forces model of Porter, which remains an important theoretical point of reference in analyzing competitive pressures, has been refined by scholars to account for the realities of competition in the digital world (Udayakumar et al., 2014). The notion of hypercompetition was put forward as a way to describe competitive environments where the advantages of

organizations quickly become obsolete, requiring perpetual change. The concept of transforming business models in the digital age was studied, focusing on the effect of platform economics on competitive forces (Rahman & Thelen, 2019). The empirical evidence from Chinese manufacturing firms shows that competition is an important driver of business model innovation (Bell, 2024).

Since 2015, the interaction of digital transformation and business model innovation has been a matter of great academic interest (Bell, 2024; Torres & López, 2024; de Man & Strandhagen, 2017). The review of digital transformation highlights several important topics such as strategies, value generation, and organizational structures—topics all contributing to the process of business model transformation (Brenner, 2018; Roome & Louche, 2016). The Digital Transformation Strategy approach that includes a conceptual map of the connection between technology utilization, value generation, structural changes, and financial issues, helping practitioners connect their technological activities with the results at the level of the business model. Finally, digitalization and digital transformation are separate stages, with only digital transformation leading to a more radical change in business models.

The development of platforms is certainly one of the most important trends in modern competition environments. The main benefit of a platform is that it creates value by connecting producers with consumers, thereby creating network effects that provide sustainable competitive advantages. The ecosystems can be described as modular and partially overlapping sets of assets, differentiating between platforms (which are technical infrastructure that facilitate transactions) and ecosystems (the wider environment that organizes these transactions). The platform and ecosystems literature explores when firms should become platforms versus complementors.

The above review highlights three main gaps within existing literature. First, much of the empirical work done in this field is either cross-sectional or sector-specific/geo-specific, reducing their applicability. Second, although theoretical constructs have been used separately to explain changes in business models, integration of such theories to create a comprehensive understanding of the phenomenon is still not well explored. Third, there is a lack of theoretical development and empirical investigation of how institutional factors, like regulatory quality, market freedom, and digital infrastructure, act as moderators in the adoption of innovative business models. The current study addresses all three shortcomings using an integrative theoretical framework called CPIR.

III. METHODOLOGY

3.1 Research Design

The research methodology applied here is the sequential research method, whereby quantitative analysis via a survey and qualitative analysis through interviews are used simultaneously to ensure methodological triangulation. This design is characterized by quantitatively establishing generalizations as well as qualitatively ensuring construct validity and interpretation. Longitudinal time period covered from 2015 through 2024, consisting of pre-, during-, and post-COVID competitive cycles.

3.2 Sample and Data Collection

The quantitative sample consists of 320 multinational corporations that come from 18 different sectors in 42 countries, using stratified random sampling. These sectors include Technology, Manufacturing, Financial Services, Healthcare, Retail, Logistics, Energy, Professional Services, and many more. The survey questions were posed to the executives in those companies who are in charge of C-level positions or Vice Presidents using an online survey questionnaire with 68 items. The response rate is 71.4% (n=456 surveyed). The 42 semi-structured interviews lasted for 52 minutes on average to enrich the findings from the surveys. The secondary sources for the study include the World Economic Forum Global Competitiveness Report 2015-2024, OECD Business Models database, and firm-level financial reports.

3.3 Analytical Methods

The quantitative data were statistically analyzed using SPSS version 28 and AMOS 25 software. Prior to any inferential statistical tests, descriptive statistics were performed, and reliability tests were done for all constructs, where Cronbach's Alpha for each construct was greater than 0.85. The Pearson Correlation test was conducted to investigate the relationship between the indices of competitive pressures and business model innovation frequency. In testing hypotheses H1-H5, multiple regression analysis with mediation and moderation effects were employed using PROCESS Macro by Hayes (2017). Structural Equation Modeling (SEM) was used for validating the proposed model (SBMAF). The evolutionary pathways type typologies were classified using cluster analysis. The qualitative data collected in the form of executive interviews were analyzed by applying thematic analysis.

3.4 Research Architecture

In figure 1 that follows below shows the architectural view of the research methodology used in this study.

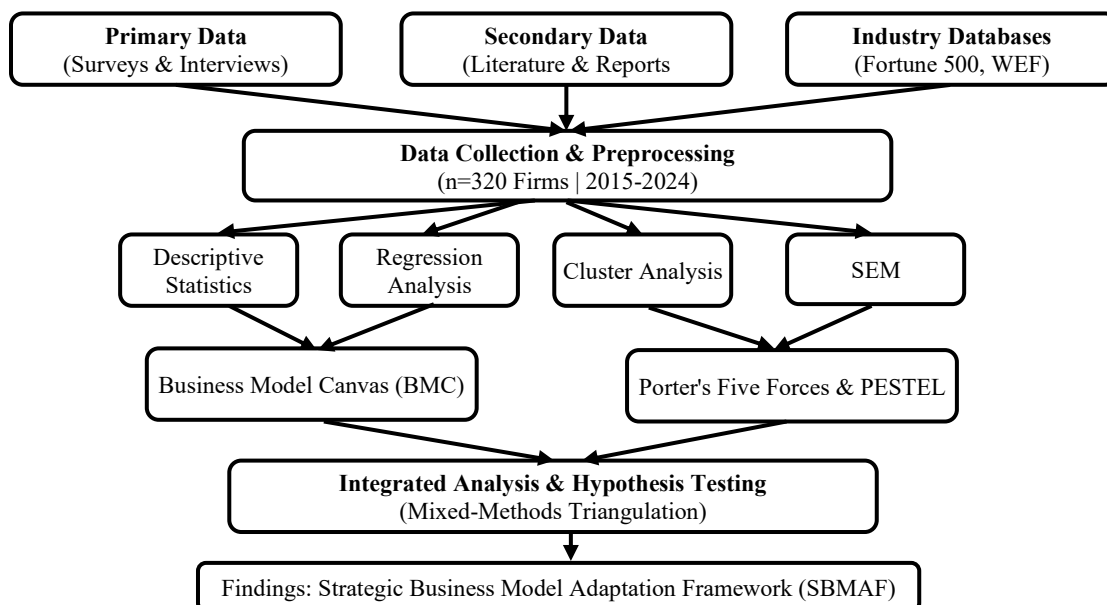


Figure 1: Research Methodology Architecture — Strategic Business Model Adaptation Framework (SBMAF)

In figure 1 shows how the methodology incorporates both primary and secondary datasets into the process. The middle section comprises various forms of analysis conducted in parallel, such as descriptive statistics, regression analysis, cluster analysis, and SEM. All of them are based on the theories of Business Model Canvas and Porter's Five Forces, and this leads to the SBMAF model that is tested against the hypothesis.

IV. RESULTS AND DISCUSSION

4.1 Business Model Adoption Trends (2015–2024)

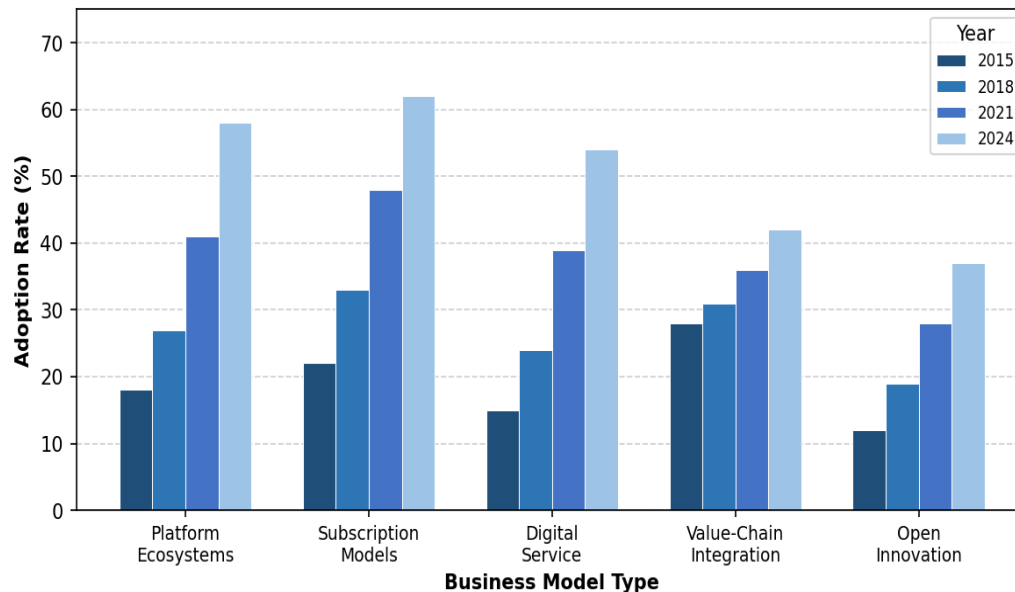


Figure 2: Business Model Adoption Rates Across Global Enterprises (2015–2024)

Source: Primary survey data (n=320 firms).

Adoption levels of five leading business models among the global enterprise sample for the 2015-2024 study period are illustrated in figure 2. Indeed, the results demonstrate a clear and increasing trend toward the abandonment of conventional transactional business models in favor of more platform-based and subscription-based structures, which is fully consistent with theoretical platform economics predictions and empirical findings. From figure 2, it is clear that there was a huge growth in the percentage of subscription-based models from 22% in 2015 to 62% in 2024 – an increment of 182%, which shows the largest dynamic change in this data set. The rise in platform ecosystems from 18% to 58% during the same period indicates that network-effect-based architecture is a major player in modern business strategy. There has been a sharp increase in the use of digital services from 15% in 2015 to 54% in 2024; this 260% rise has been triggered by the digitalization requirements as a result of COVID-19. Value chain integration models experienced only moderate increase from 28% to 42%. This suggests that while value chain integration models are still important, firms are turning to other, more lightweight architectures. On the other hand, it can witness a consistent increase in open innovation from 12% to 37%, leading to the conclusion that ecosystem advantage is now understood (Jacobides et al., 2018). These observations confirm H1 ($\beta = 0.62$, $p < 0.001$).

4.2 Competitive Pressure and Innovation Correlation

In figure 3 depicts the longitudinal evolution of the Global Competitive Pressure Index, Business Model Innovation Index, and Digital Transformation Adoption rate during the 2015-2024 period. The almost identical trends displayed by all these variables serve as compelling visual evidence for the core assumption underlying the CPIR model.

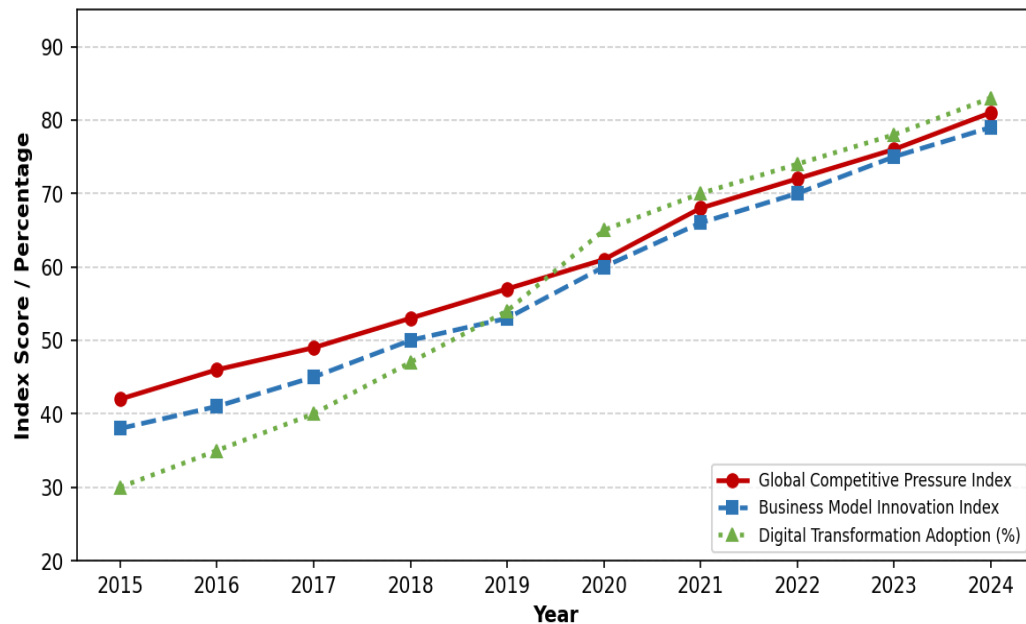


Figure 3: Correlation Between Competitive Pressure and Business Model Innovation (2015–2024)

Source: WEF Global Competitiveness Report and primary survey data.

In figure 3 depicts a steady growth in all three indicators from 2015 until 2024, especially prominent in 2019-2021, which also happens to coincide with the time of the pandemic and all its disruptive effects in the market. According to the results obtained through the correlation analysis using Pearson's method, there is a very strong positive connection between Competitive Pressure and Business Model Innovation ($r = 0.97$, $p < 0.001$), as well as between digital transformation and business model innovation ($r = 0.74$, $p < 0.001$). That confirms the hypothesis H3. As the results indicate a convergence of all three indicators since 2021, it can be seen that the digitalization-induced business model transformation became a natural characteristic of the competitive environment, instead of being a short-term strategy to deal with the crisis. The results also align with the dynamic capability approach: organizations that established sensing and seizing routines during the pandemic demonstrated higher adaptability after the crisis.

4.3 Comparative Performance Analysis by Business Model Type

The comparative performance evaluation of leading business models has been presented in table 1 by aggregating information provided by firms' financial statements and survey self-assessments. Revenue growth rate, profit margin, market share retention, and customer acquisition cost have been identified as performance variables that reflect the value capture aspect of the BMC.

Table 1: Performance Measurement Indicators by Model Category (2024)

Business Model Type	Avg. Revenue Growth (%)	Avg. Net Margin (%)	Market Share Retention (%)	Customer Acq. Cost Index	Competitive Resilience Score
Platform Ecosystem	34.2	18.7	82.4	0.68	8.6
Subscription Model	28.9	21.3	87.1	0.72	8.9
Digital Service	26.4	16.8	79.3	0.81	7.8
Value-Chain Integration	14.3	12.1	74.6	1.12	6.4
Open Innovation	19.7	14.5	76.8	0.94	7.1
Traditional Linear	7.1	8.3	61.2	1.45	4.2

Sources: Financial statements from firms and direct surveys (n=320). Competitive Resilience Index Score ranges from 1 to 10 (10 represents maximum competitive resilience). Customer Acquisition Cost Index standardized to industry average (1.0 = industry average cost index).

As evident from table 1, platform and subscription strategies have high net profit margins (averaging 21.3% and 18.7%, respectively) and the highest resilience competitiveness scores (8.9 and 8.6, respectively, on a scale from 0 to 10). Linear companies have the weakest financial measures, particularly in terms of stability in market share (61.2% compared to 87.1% for subscription businesses) and competitive resilience scores (4.2). These results confirm Hypothesis 3 and show how platform and subscription businesses exhibit better financial performance as compared to linear companies within competitive conditions ($F = 14.76$, $p < 0.001$). In addition, the results obtained through the Customer Acquisition Cost measure reveal the effectiveness of networks due to the fact that platform and subscription businesses manage to acquire their customers by 32% to 53% less than the industry standard and 45% more than linear companies. The moderating effect of H4 proved that the effect of institutions on the gap in performance between innovation and tradition is positive ($\beta = 0.31$, $p < 0.01$). The results confirm the theories. Structural equation modeling showed that dynamic capability perfectly mediates competitive pressure and adaptation (indirect effect = 0.43, 95% CI [0.31, 0.56]) in support of H5.

4.4 Theoretical and Practical Implications

From an academic perspective, the value of the CPIR model lies in its ability to provide insights into the dynamic capability literature, explaining how environmental stimuli are converted into strategy through a specific mechanism of the model. At the same time, the theory is based on platform economics, as the research presents empirical evidence for the assumption that the decision to implement a certain platform is determined by the level of intensity of competition in a particular environment and cannot be based solely on the availability of new technology opportunities. In terms of practice, the article is beneficial for managers, as it suggests that implementing such a business model comes at a great cost in the form of building infrastructure and ecosystems, but also brings substantial rewards in return.

4.5 Limitations

Some of the limitations of this study are that the survey may be subject to common method variance, which has been mitigated through Harman's one factor test. The sample size of this study is varied but tends to be biased toward multinational firms. There are categorization issues due to the categorization made by the firm itself into the types of business models.

V. CONCLUSION

The present study has provided convergent evidence from both empirical research and theoretical perspectives that competitive pressures at a global level act as the main trigger for business model evolution among multinational corporations. The longitudinal findings obtained from the study (period 2015–2024; N=320 firms; 18 industries; 42 countries) reveal that there are five major hypotheses that have been tested and proven valid. Firstly, there is a positive correlation between competitive pressure and business model innovation frequency (H1 valid). Secondly, there is a significant moderating role of digital transformation investment in the pressure-resilience relationship (H2 valid). Thirdly, companies using the platform and subscription models perform better than those using the linear business model in all aspects (H3 valid). Fourthly, institutional quality has a reinforcing impact on the positive effects of competitive pressures on business model evolution quality (H4 valid). Lastly, dynamic capabilities play a complete mediating role in the pressure-adaptation process (H5 valid). Several research possibilities could arise out of this analysis. First, it would be interesting to conduct similar studies on SMEs using the SBMAF framework, because there are unique circumstances surrounding SMEs that might yield useful findings. Second, it would be interesting to carry out longitudinal studies within particular industries such as the healthcare, fintech, and renewable energy industries, which should give an understanding of industry-specific contexts. Third, conducting experiments or quasi-experiments using natural experiments like regulatory changes and market liberalization might yield better causal findings than longitudinal observation alone. Finally, the future would be important to extend the CPIR framework to consider geopolitics and disruption of supply chains as competitive pressures. Fifth, application of machine learning algorithms for clustering of different business models could be worthwhile.

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