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The Impact of Disruptive Innovations on Corporate Strategies

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Abstract

One of the key contributing factors to the disappearance of more than half of the corporations listed in the Fortune 500 was the failure of many corporations to respond in a timely manner to dynamic changes in the global market, where innovative strategic action and proactive positioning play a crucial role in maintaining a competitive advantage. This challenge is particularly evident in the context of disruptive innovations, which, due to their inherent nature, often go unnoticed by large corporations, posing significant risks to their market positioning. This paper examines the intensity and impact of disruptive innovations on the operations of incumbent corporations and analyzes how effectively these organizations respond to the challenges posed by disruptive innovation. In addition to presenting a typology of disruptive innovations, the study analytically examines their impact on corporate strategies, with a particular focus on the principles of open innovation. The findings, presented as a critical reinterpretation and theoretical synthesis, suggest that there is no universal prescriptive strategy for overcoming the effects of disruptive innovations. Incumbent organizations often rely on standardized best practices adopted from other corporations in their innovation processes, which do not necessarily lead to desired outcomes. This paper contributes to a deeper understanding of the phenomenon of disruptive innovation. It provides valuable insights for both theoretical exploration and practical application, particularly in the domain of corporate strategies at national and regional levels.

Key words: disruptive innovation; corporate strategies; innovation management; strategic positioning

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Introduction

Disruptive innovation today represents one of the critical challenges that corporations, as well as other enterprises, must confront. This phenomenon serves as the foundation for the well-known discourse of the "innovator's dilemma," as presented by Christensen (1997) in his work. Due to its nature, the phenomenon of disruptive innovation often manages to fly "under the radar" of large corporations, potentially causing significant harm to their market positioning. Beyond the corporate context, disruptive innovation can be encountered in nearly all segments of both the private and public sectors. For instance, Jönsson (2017) examines the effects of disruption within the context of the European Union's (EU) healthcare industry, specifically focusing on the public sector.

Despite the growing interest within the academic community regarding the phenomenon of disruptive innovations, this field remains relatively under-researched. Although there has been an increase in literature analyzing this concept, the existing corpus of scientific knowledge is limited concerning systematic investigations into the effects of disruptive innovations on the strategic positioning of incumbent organizations. There is a particular lack of empirical insights into how corporations adapt and respond in order to preserve or enhance their market positions when faced with disruptive effects. This scholarly gap highlights the need for further research to identify concrete patterns of adaptation and strategies to mitigate the impacts of disruptive innovations in the corporate context.

The aim of this paper is to deepen the understanding of the intensity and effects of disruptive innovations on corporate operations, as well as the ways in which these organizations confront the challenges generated by disruptive innovations. The research focus is directed at analyzing the strategic responses of incumbent corporations, examining their resilience and adaptability in the context of market disruptions. The paper also provides a typology of disruptive innovations and conducts an analytical evaluation of their impact on corporate business strategies, with a particular emphasis on the principles of open innovation.

Following the introductory section, the paper presents a theoretical framework and a review of relevant literature on disruptive innovations. In the third chapter, titled "Critical Reinterpretation and Theoretical Synthesis," the theory of disruptive innovations is analyzed through a critical reinterpretation of existing theoretical sources and empirical research. Special emphasis is placed on factors influencing the ability of incumbent firms to respond promptly to disruptive threats, including organizational inertia, limited resources, and cognitive barriers among management. The paper concludes with final considerations and a list of references.

Theoretical background, concept, and perspectives

The concept of innovation, as defined by economic theory, has evolved through various approaches and interpretations over time. In his early works, Schumpeter (1911)

defines innovation as the application of new combinations of production resources, emphasizing the process of introducing novelties into production structures. In his later writings, Schumpeter (1934) further refines the concept of innovation within an economic context, outlining five key dimensions: the introduction of new products, the development of new production processes, the opening and establishment of new markets and market structures, and the development of new sources of raw materials and other production inputs.

Building on these theoretical foundations, Nelson et al. (1977) define innovation as a significant change in products or processes in situations where there is no prior experience, highlighting the roles of uncertainty and experimentation in the innovation process. Conversely, Amabile et al. (1996) approach innovation from an organizational perspective, defining it as the successful application of a creative idea within an organization, thereby linking innovative activities with the management of creativity and organizational culture.

The technological dimension of innovation is reflected in the development of new products, services, and production processes, while the organizational component pertains to the implementation of new management practices, improvements in organizational structure, and the adoption of creative solutions within organizational frameworks. The market dimension, on the other hand, manifests in the opening of new markets, the development of consumer segments, and the adaptation of business models in response to changing demand and market trends.

The interconnectedness of these aspects emphasizes that innovations do not operate in isolation; rather, they function as part of a complex dynamic interaction among an organization's technical capabilities, market conditions, and strategic management decisions. Their successful implementation often results in increased productivity, product and service differentiation, and enhanced resilience of organizations to market disruptions and technological changes.

Thus, in the contemporary economic context, innovations are not viewed solely as tools for achieving short-term results but as fundamental elements of sustainable development that support long-term market stability, adaptability to change, and the promotion of knowledge-based growth.

These various theoretical approaches collectively contribute to a deeper understanding of innovation as a multifunctional phenomenon that encompasses technological, organizational, and market dimensions, which are crucial for achieving sustainable competitive advantage and long-term economic growth.

Disruption in the typology and classification of technology innovation

In their works, Kim and Mauborgne (2017), Dodgson and Gann (2023), Vlačić et al. (2019), and others highlight how the evolution of innovation has led to the development of various types of innovations, reflecting an increasingly complex approach to understanding innovation processes. The historical development of innovation classification has transitioned from traditional forms, such as product and

process innovations, to contemporary, specialized strategies, including "blue ocean" innovation strategies and cost-saving management innovations.

This diversity in the approach to classifying innovations within academic literature and business practice has led to the introduction of multiple parallel typologies, which facilitate a better understanding of innovative activities across different contexts. The multitype classification is based on the simultaneous recognition of various forms of innovation. In contrast, strength-based classifications focus on the intensity of impact that an innovation has on the market or business model.

Additionally, multilayered classification of innovations encompasses the analysis of different dimensions of innovation processes within organizations, whereas dichotomous and dual-dichotomous classifications rely on a binary approach to separating innovations based on key characteristics, such as the distinction between radical and incremental innovations.

Finally, process-related classifications examine innovations within the context of the entire innovation cycle, emphasizing the connections between the phases of ideation, development, implementation, and commercialization. This approach enables a more comprehensive understanding of innovation activities and underscores the importance of systematic innovation management within organizations.

These diverse classification frameworks contribute to a deeper theoretical and practical understanding of innovations, allowing organizations to more precisely identify their innovative potential and adjust strategies in line with market dynamics and technological advancements.

Although the literature presents various typologies of innovation, Christensen and Raynor (2013) propose a simpler variant that categorizes innovations into two fundamental groups: 'sustaining' (incremental and continuous) and disruptive innovations. Sustaining innovations refer to enhancements of existing products, processes, or services that do not fundamentally alter market relationships or significantly impact social or economic systems. This type of innovation primarily focuses on gradual technological improvements, such as enhancing efficiency or augmenting the functionality of existing solutions (Tran, 2008; King & Baatartogtokh, 2015). While sustaining innovations often lead to quality improvements, they do not necessarily result in entirely new products or market segments.

Disruptive innovations, as defined by Christensen (1997) and later elaborated upon by Christensen and Raynor (2003), represent more radical forms of innovation that disrupt existing market structures. The authors caution that the term "disruptive innovation" is often misapplied to any new product that disturbs market practices. However, disruptive innovation more precisely refers to innovations that, in their initial stages, address specific niche needs often at a lower price or with limited functionality but over time significantly alter dominant market relationships. Christensen et al. (2003) note that radical or discontinuous innovations, despite their technical differences, can provide substantial levels of market novelty. Radical innovations encompass technological breakthroughs and innovative products that profoundly

redefine user experience and product utilization, such as the transition from landline phones to smartphones.

In contrast to radical innovations, disruptive innovations primarily introduce a new value proposition, shifting the focus from the technology itself to redefining how end-users perceive the value of a product or service. Examples include services like Netflix, which disrupted traditional video rental chains by offering an affordable digital subscription model.

While various typologies of innovation exist (Vlačić, 2018), Christensen (2013) presents a model that classifies innovations into two foundational categories: sustaining (incremental and continuous) and disruptive. Sustaining innovations refer to activities that generally do not impact the market or society and often manifest as improvements to existing products. However, such innovations do not necessarily lead to the creation of entirely new products (Tran, 2008; King & Baatartogtokh, 2015).

The diffusion of a wide range of digital technologies in the first wave of development—including the Internet, Web 2.0, the Internet of Things, Big Data analytics, and cloud technologies—has threatened entrenched business models across many industries, such as postal services, telecommunications, music, education, media, banking, retail, and insurance (Greenstein et al., 2013; Bughin & Van Zeebroeck, 2017). These changes are typically driven by new market participants leveraging digital technologies to create and implement innovative business models, which often rapidly undermine the business models of market incumbents, rendering them obsolete. In their work, Rahman et al. (2017) provided an overview of several previously researched disruptive technologies over the past few decades, as illustrated in Table 1. This table also highlights technologies with disruptive potential and/or characteristics within the framework of Industry 4.0 and the subsequent emergence of Industry 5.0, which are either on the brink of market introduction or are already present.

Table 1

Disruptive innovation technology examples in the literature and emerging technologies possessing disruptive characteristics

Disrup. tehnology	**Incumbent technologies**
Digital storage media	Compact Disc (CD)
Streaming video portals	DVD, BlueRay, TV Cable
Smart phones	Classic mobile telephones, digital cameras
Examples of emerging technologies with distinct disruptive characteristics	
Driverless vehicles – car and ride sharing	
New generation Internet of Things – IoT, Internet of Everything	
Next generation drones: air, ground, marine	
General AI - ChatGpt, DeepSeek, …	
Autonomous and humanoid/humancentric robots	
Next gen. Virtual/augmented/mixed reality	

Source: Rahman et al. (2017), expanded upon by the author

Recently, Deepseek has introduced a significant disruption to the market with its innovative deep web search technology (Bloomberg, 2025), enabling users to access

information that was previously difficult to obtain. This technology provides advanced analytical tools that transform how organizations collect and utilize data, enhancing their competitiveness in a dynamic digital environment.

Theory of disruptive innovation

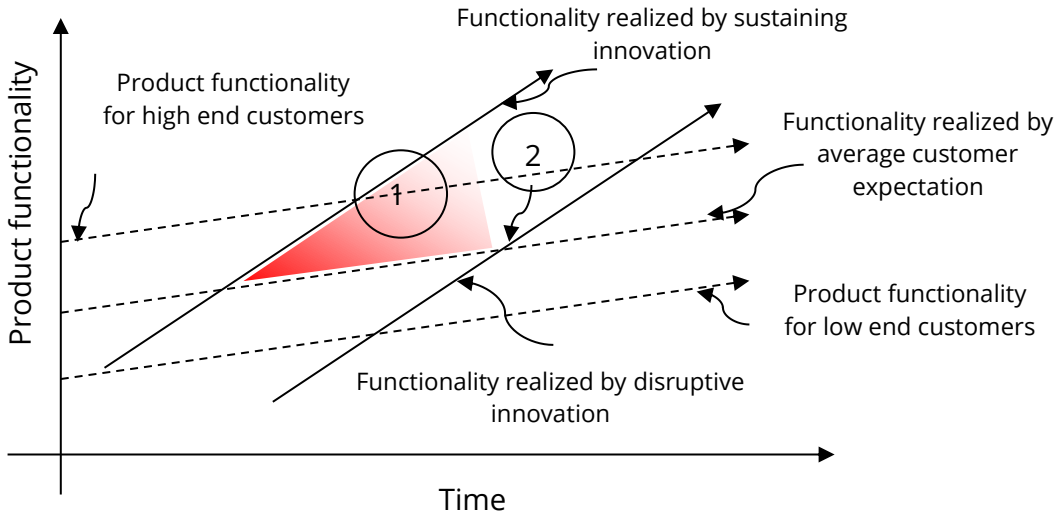
The theory of disruptive innovation examines the mechanisms through which smaller market participants introduce more accessible and affordable solutions, thereby disrupting the business models of established companies, known as incumbents (Gaul, 2014). Unlike products and services resulting from sustaining innovations, which primarily focus on improvements within existing market frameworks, disruptive innovations often emerge outside conventional market dynamics. New market entrants utilize disruptive innovations to gain a competitive advantage in saturated markets dominated by incumbents, where their offerings frequently remain outside the attention of existing market leaders in the early stages of development. Disruptive innovators typically target niche segments or less demanding consumers that are often overlooked by incumbents (Lozić, 2020).

This lesser visibility and focus on limited market segments allow disruptive companies to develop their business models with minimal responses from incumbent firms. A defining characteristic of disruptive innovations is that they tend to be simpler to use, more financially accessible compared to premium products offered by established companies, and often better tailored to the needs of niche consumers. Due to these attributes, disruptive innovations attract new consumers who were previously not part of the targeted market, leading to an expansion of market potential and the inclusion of new demographic groups (Garcia & Calantone, 2002).

Disruptive innovations have a significant macroeconomic impact, stimulating industrial growth and creating new job opportunities, particularly during the early commercialization phase (Lambert, 2014). Their emergence enables new market players to gain market share and become competitors to established firms, often resulting in the redefinition of dominant business models and fostering dynamic market competition.

The operation of disruptive innovation and its impact on market dynamics is illustrated in Figure 1 through a theoretical framework based on Christensen's model (1997), which the authors have further developed. The graphical representation initially defines two fundamental product functionalities, illustrating various innovation trajectories and their market effects.

Figure 1
Illustration of product functionalities for sustaining and disruptive technological innovation



Source: Christensen (1997, p. 16), adapted by the author

The solid line marked as number 1 in the model represents the development of product functionalities resulting from sustaining innovations, where progress is achieved through incremental technological improvements and optimizations of existing solutions. This type of innovation focuses on enhancing product performance, often tailored to the needs of the most demanding users or premium market segments.

Conversely, the second solid line, marked as number 2, illustrates the development of disruptive innovation. In its early stages, a disruptive product is characterized by lower performance levels compared to established products; however, its key advantage lies in its accessibility, ease of use, and targeting of underserved market segments.

The area designated as number 1 reflects the moment when there is an oversupply of product functionalities developed through sustaining innovations. During this phase, users begin to receive functionality levels that exceed their actual needs, thereby creating an opportunity for disruptive innovations to attract consumers with simpler yet sufficient solutions.

This theoretical model emphasizes how disruptive innovations alter market dynamics not through direct competition with established products, but by drawing in new market segments that were previously unengaged. It is crucial to understand that incumbents often fail to recognize the threat posed by disruptive innovations in their early stages of development, which can lead to significant market share losses in later phases of disruptive product expansion.

According to Guttentag and Smith (2017), disruptive innovations in their initial development phases are characterized by low attractiveness and limited market

visibility. Their early adopters are typically fewer demanding consumers (from the low-end segment) or those who have not previously used existing competitive products. This initial modest market appeal often results in limited commercial success and minimal profits, meaning that disruptive products do not pose a significant threat to leading incumbent firms at this stage.

As disruptive innovations evolve and improve their performance, they gradually align with the needs of a broader consumer base, including those with higher-quality and more functional requirements. This process enables disruptive innovations to penetrate already established markets, where they progressively assert themselves as viable alternatives to incumbent products. While incumbent products may be technologically superior, they frequently deliver a level of functionality that exceeds the actual needs of the average consumer, a phenomenon known as performance oversupply.

Guttentag and Smith (2017) highlight that due to their initially low market attractiveness and limited revenues, disruptive innovations are often overlooked by incumbent firms. Leading market players tend to focus on more profitable market segments and products with high margins, while disruptive innovations initially target less lucrative niches.

However, as disruptive innovations mature and gain greater market acceptability, they can become formidable competitive threats. By the time incumbents recognize the dangers posed by disruptive innovation, it is often the case that the disruptive product has already firmly established itself in the market and captured a significant market share. At this stage, incumbents may find themselves at a considerable disadvantage, as disruptive innovations have transitioned from niche segments to robust market alternatives, challenging the stability and dominance of incumbent firms.

This model of disruptive innovation development emphasizes the importance of promptly recognizing market changes and strategically managing innovation processes, enabling incumbents to anticipate and respond to threats arising from disruptive strategies.

Critical Reinterpretation and Theoretical Synthesis

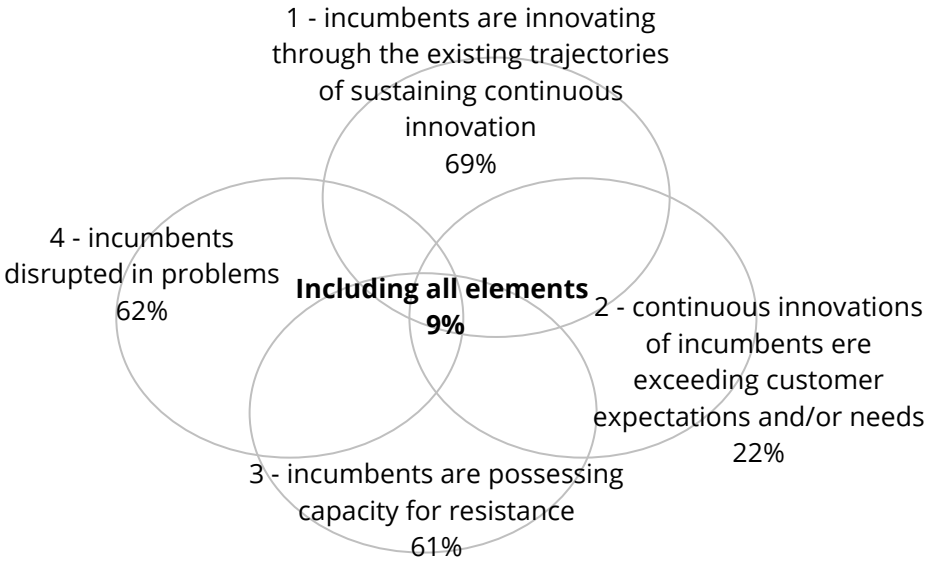
The rapid dynamics and pace of technological change can lead to dramatic shifts in the strategic positioning of incumbent firms, compelling them to develop entirely new sets of knowledge and capabilities to maintain market competitiveness (Tushman & Anderson, 1986). During technological transitions, incumbents face numerous challenges that may result in inadequate or delayed responses to disruptive innovations. Researchers investigating these processes identify various causes for such shortcomings, including organizational inertia (Tripsas & Gavetti, 2000), a lack of internal capabilities or economic-financial incentives for adaptation (Henderson, 1993), limited resource availability and allocation (Christensen, 1997), insensitivity to environmental changes (Kammerlander & Ganter, 2015), and cognitive inertia among top management (Hill & Rothaerme, 2003). Additional factors include absorptive

capacity and inadequate knowledge management within organizations (Dabic et al., 2019).

In their qualitative study, King and Baatartogtokh (2015) analyze the theory of disruptive innovation using a sample of 77 corporations, drawing on disruption cases described in earlier works by Christensen (1997) and Christensen (2013). The authors identify four key elements of the theory of disruptive innovations that elucidate the behavior of incumbent firms in the context of market disruptions (Figure 2). First, incumbents typically continue to innovate within existing technological trajectories, focusing on incremental product improvements – 69% of the examined. Second, they offer products or services that exceed customer needs, providing a higher level of functionality than the market demands, which results in performance oversupply - 22% of the examined. Third, incumbents possess specific resistance capacities, including resources and capabilities to respond to market threats, but often fail to utilize them promptly - 61% of examined. Fourth, when disruptive innovations mature, incumbents find themselves threatened in the market, leading to significant business consequences, 62% of the examined.

The empirical results from King and Baatartogtokh (2015) are illustrated in a graphical representation (Figure 2), which visualizes the relationships between the continuous innovations of incumbent firms and the advancement of disruptive innovations. The model highlights how disruptive innovations, despite initial performance limitations, can significantly jeopardize market leaders if strategic adjustments are not made on time.

Figure 2
Results of the study on the impact of disruption based on a sample of 77 corporations



Source: King and Baatartogtokh (2015, p. 83), adapted by the author

Empirical results from the study indicate that disruptive innovations rarely manifest in their full capacity as a threat that completely destabilizes incumbent firms. However, although complete market disruption is not a common phenomenon, this does not diminish the fact that disruptive innovations can lead to significant negative consequences, ranging from a reduction in market share and profits to a lasting loss of competitive position. The case of Eastman Kodak exemplifies how neglecting disruptive signals, despite a strong market presence and technical expertise, can result in fatal outcomes for an incumbent organization.

King and Baatartogtokh (2015), based on the analysis of 77 case studies and interviews with representatives of incumbent firms, conclude that disruptive innovations do not operate universally and do not always pose threats of the same intensity. Their findings suggest that the comprehensive theory of disruptive innovation can be analytically and operationally applied only under specific conditions, which include: (1) the presence of significant technological discontinuities, (2) the emergence of market niches with unaddressed needs among lower-tier consumers, and (3) the limited capacity of incumbents to adapt and innovate beyond existing technological paradigms timely.

The authors also emphasize that disruptive innovations often lead to a gradual erosion of market share for incumbents, rather than immediate destabilization, which further complicates their detection and risk management. This asymmetry in threat perception can result in delayed reactions to changes, particularly in industries with slower innovation cycles.

To effectively apply the theory of disruptive innovation in practice, it is essential to develop analytical frameworks that recognize not only the immediate impact of disruption but also its long-term consequences on the market position of incumbents. In this context, the theory of disruptive innovation should not be viewed as a static framework; rather, it should be seen as a dynamic process, subject to the specifics of the industry, technological development, and consumer behavior.

Response of companies to disruption

Given the accelerated digitalization of business processes and markets, incumbents that successfully adapt their business models or implement innovative strategies, such as developing new products or acquiring innovative solutions, often manage not only to maintain but also to strengthen their market position (Bughin & Van Zeebroeck, 2017). These examples of adaptation underscore the ability of incumbents to ensure sustainability through proactive innovation strategies, despite market changes.

King and Baatartogtokh (2015) propose three fundamental strategies that incumbents can leverage to confront disruptive threats. The first strategy involves calculating the "cost of victory," where incumbents assess the feasibility of responding to disruption in relation to potential long-term market benefits. The second strategy focuses on the effective utilization of existing organizational capacities, emphasizing optimal resource

allocation, competencies, and technologies to mitigate market threats. The third strategy encompasses collaboration with other organizations, allowing incumbents to partner with innovative firms, research centers, or even competitors to collaboratively address disruptive challenges.

Additionally, the CapGemini (2015) report expands upon these findings by identifying key barriers that incumbents face when confronting digital disruption. One significant challenge highlighted is the phenomenon of organizational complacency, wherein past successes create a perception of stability, thus reducing the willingness to embrace strategic changes. This can lead to inertia among top management, further complicating timely responses to disruptive threats.

CapGemini (2015) further outlines four resistance models to digital disruption that incumbents can adopt to safeguard against market threats. The first approach involves acquiring digital talent, specifically by hiring innovative experts possessing the skills necessary for developing new digital solutions. The second approach centers on acquiring disruptors, as incumbents seek to take over leading disruptive firms to integrate their innovative technologies into their own business models. The third model involves legal measures aimed at disruptors, used as a means to slow down emerging market threats, while the fourth approach combines elements of all previous strategies, tailored to the specific market circumstances and level of threat.

These models illustrate the complexity and multidimensional nature of incumbent firms' responses to digital disruption. The effectiveness of any given strategy hinges upon the organization's ability to timely identify the level of threat, align internal resources, and adapt to new market dynamics through strategic innovation, proactive talent acquisition, and dynamic partnership management. Further research should examine the extent to which the combination of these approaches can contribute to the long-term market stability of incumbents in the context of digital transformation.

Conclusions

This paper conceptually and theoretically illustrates how the phenomenon of disruptive innovation has become globally prevalent as a result of accelerated technological development and the digital transformation of business ecosystems. In the context of increasingly intense global competition, disruptive innovations facilitate the emergence of new market participants who successfully disrupt existing market structures through innovative products and tailored business models, often jeopardizing the position of incumbent firms or established market leaders.

Incumbents face the imperative of proactively responding to technological changes in their environment to ensure long-term sustainability and market relevance. As Christensen emphasizes, the ability of incumbent firms to recognize early signals of disruptive changes and timely implement tailored innovation strategies is crucial for their long-term stability. However, in practice, incumbents often rely on prescriptive examples of best practices from other corporations in managing innovation, which does not necessarily guarantee successful outcomes.

True competitive advantage stems from an organization's ability to develop customized strategies that take into account specific market and sector conditions, available resources, and organizational capacities. Only after establishing tailored strategic frameworks can incumbents utilize existing methodological approaches—such as open innovation, iterative experimentation, or hybrid innovation management models—to effectively navigate disruptive threats.

The scientific contribution of this paper lies in its ability to deepen the theoretical understanding of disruptive innovations by synthesizing existing research and practical insights. The paper presents additional arguments for the necessity of personalized approaches in developing innovation management strategies, emphasizing the importance of a dynamic approach that considers sector-specificities and organizational competencies.

The findings of this study can serve as a foundation for designing and implementing empirical research at national and regional levels (Vlačić et al., 2019), with a particular focus on less developed economies and emerging markets. Future research could specifically investigate various models of adaptation to disruptive innovations within the context of local economic systems and explore how different levels of technological readiness influence the resilience of incumbent firms in confronting market disruptions.

References

1. Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M., (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184. https://doi.org/10.2307/256995
2. Bloomberg. (2025). DeepSeek: There's a Disruption Whale in Nvidia's Moat, https://www.bloomberg.com/opinion/articles/2025-01-28/deepseek-there-s-a-disruption-whale-in-nvidia-s-moat
3. Bughin, J., & Van Zeebroeck, N. (2017). Does digital transformation pay off? Validating strategic responses to digital disruption. *Academy of Management Proceedings, 2017*(1), 15155. https://doi.org/10.5465/ambpp.2017.15155abstrac
4. CapGemini. (2015). When Digital Disruption Strikes: How Can Incumbents Respond?, https://www.capgemini.com/consulting/resources/when-digital-disruption-strikes/# , report
5. Christensen, C. M., (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston, MA: Harvard Business School Press
6. Christensen, C. M., (2013). *The innovator's dilemma: when new technologies cause great firms to fail*. Harvard Business Review Press.
7. Christensen, C. M., & Raynor, M. E. (2003). Why hard-nosed executives should care about management theory. *Harvard Business Review, 81*(9), 66-75.
8. Dabic, M., Vlacic, E., Ramanathan, U., & Egri, C. P. (2020). Evolving Absorptive Capacity: The Mediating Role of Systematic Knowledge Management. *IEEE*

Transactions on Engineering Management, 67(3), 783-793. https://doi.org/10.1109/tem.2019.2893133

9. Dodgson, M., & Gann, D. (2023). Innovation and big science projects. *Handbook on Innovation and Project Management*, 423-433. https://doi.org/10.4337/9781789901801.00032
10. Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: a literature review. *Journal of Product Innovation Management, 19*(2), 110-132. https://doi.org/10.1111/1540-5885.1920110
11. Gaul, P. (2014). Organizations lack planning and tools to deal with disruptive change. TD (August).
12. Greenstein, S., Goldfarb, A., & Tucker, C. (2013). The Economics of Digitization. https://doi.org/10.4337/9781784710408
13. Guttentag, D. A., & Smith, S. L. J. (2017). Assessing Airbnb as a disruptive innovation relative to hotels: Substitution and comparative performance expectations. *International Journal of Hospitality Management, 64*, 1-10. https://doi.org/10.1016/j.ijhm.2017.02.003
14. Henderson, R. (1993). Underinvestment and Incompetence as Responses to Radical Innovation: Evidence from the Photolithographic Alignment Equipment Industry. *The RAND Journal of Economics, 24*(2), 248. https://doi.org/10.2307/2555761
15. Hill, C. W. L., & Rothaermel, F. T. (2003). The Performance of Incumbent Firms in the Face of Radical Technological Innovation. *The Academy of Management Review, 28*(2), 257. https://doi.org/10.2307/30040712
16. Jönsson, B. (2017). Disruptive innovation and EU health policy. *The European Journal of Health Economics, 18*(3), 269-272. https://doi.org/10.1007/s10198-016-0840-z
17. Kammerlander, N., & Ganter, M. (2015). An Attention-Based View of Family Firm Adaptation to Discontinuous Technological Change: Exploring the Role of Family CEOs' Noneconomic Goals. *Journal of Product Innovation Management, 32*(3), 361-383. https://doi.org/10.1111/jpim.12205
18. Kim, W. C., & Mauborgne, R. A. (2017*). Blue ocean leadership (Harvard business review classics)*. Harvard Business Review Press.
19. King, A. A., & Baatartogtokh, B. (2015). How useful is the theory of disruptive innovation? *MIT Sloan Management Review, 57*(1), 77. https://sloanreview.mit.edu/article/how-useful-is-the-theory-of-disruptive-innovation/
20. Lambert, C. (2014). Disruptive genius. *Harvard Magazine, 116*(6), 38-43. http://harvardmagazine.com/2014/07/disruptive-genius
21. Lozić, J. (2020). Utjecaj razvoja tehnologije na temeljne postavke teorije disruptivnih inovacija. Zbornik radova Međimurskog veleučilišta u Čakovcu, 11(2), 45-52.

22. Nelson, R. R., & Winter, S. G. (1977). In search of useful theory of innovation. Research policy, 6(1), 36-76. https://doi.org/10.1016/0048-7333(77)90029-4

23. Rahman, A., Hamid, U. Z. A., & Chin, T. A., (2017). Emerging Technologies With Disruptive Effects: A Review. *PERINTIS eJournal*, *7*(2), 111-128

24. Schumpeter, J., (1911). Theorie der oekonomischen Entwicklung. Duncker & Humblot, München – Leipzig.

25. Schumpeter, J., (1934). The Theory of Economic Development. English edition, Harvard University Press, Cambridge.

26. Tran, T. (2008). A conceptual model of learning culture and innovation schema. *Competitiveness Review, 18*(3), 287-299. https://doi.org/10.1108/10595420810906046

27. Tripsas, M., & Gavetti, G. (2000). Capabilities, cognition, and inertia: evidence from digital imaging. *Strategic Management Journal, 21*(10-11), 1147-1161. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1147::aid-smj128>3.0.co;2-r

28. Tushman, M. L., & Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly, 31*(3), 439. https://doi.org/10.2307/2392832

29. Vlačić, E. (2018). Disruption Disrupted Through the Meta-Analysis. In 6th International OFEL Conference on Governance, Management and Entrepreneurship. New Business Models and Institutional Entrepreneurs: Leading Disruptive Change. April 13th-14th, 2018, Dubrovnik, Croatia (pp. 225-237). Zagreb: Governance Research and Development Centre (CIRU).

30. Vlačić, E., Dabić, M., & Aralica, Z. (2018). National Innovation System: Where do Government and Business Diverge?. *Društvena istraživanja, 27*(4), 649-669. https://doi.org/10.5559/di.27.4.04

31. Vlačić, E., Dabić, M., Daim, T., & Vlajčić, D. (2019). Exploring the impact of the level of absorptive capacity in technology development firms. *Technological Forecasting and Social Change, 138*, 166-177. https://doi.org/10.1016/j.techfore.2018.08.018

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Dr. Vlačić has been a long-standing member of the National Innovation Council of the Republic of Croatia and currently serves as President of the Energy and Environmental Innovation Council. He is also part of the working group responsible for creating the National Development Strategy 2030 and the EU Multiannual Financial Framework for Cohesion and Competitiveness. He is an evaluator and reviewer of the EU HORIZON and DIGITAL EUROPE programs, particularly on the HPC EU flagship projects.

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