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Platform-Orchestrated Enterprises: Redefining Managerial Control and Value Creation

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Abstract. This research looks into how platform-orchestrated enterprises (POEs) change the way managers are in charge and how value is created in the digital economy. It does this by using secondary data from the OECD (2024), Statista (2025), and reports from Amazon, Alibaba, Apple, and Uber. To look at the link between government centralization, boundary openness, and value capture, a panel regression model was estimated for the years 2015–2025. The results show that boundary openness increases innovation throughput by a lot ($\beta^2 = 0.41$, $p < 0.05$) but lowers the platform's direct value capture ($\beta^2 = -0.27$, $p < 0.05$). On the other hand, higher governance centralization raises the platform's revenue share ($\beta^2 = 0.33$, $p < 0.01$) but lowers complementor innovation. This is because algorithmic control intensity mediates these effects and explains 19% of the difference in value asymmetry between companies. As expected from previous theories, platforms with hybrid government that balances control and openness have better ecosystem resilience and innovation balance. The results show that in the platform economy, control has changed from managers overseeing things to architecture-based orchestration, where people work together to build value instead of managers managing things from the top down.

Keywords: Platform economy, ecosystem governance, managerial control, algorithmic coordination, value creation, digital business models.

Introduction

Platform-based business models have changed how companies manage their relationships, organize their resources, and make money in the digital economy. Platform-orchestrated enterprises (POEs) make money by letting many independent participants interact with each other and controlling those interactions. This is different from standard linear firms that use hierarchical management and controlled value chains. This change goes against common ideas of organizational

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borders, managerial control, and decision-making power (Jacobides, Cennamo, & Gawer, 2018; Hein et al., 2020). In the platform economy, power is not based on who owns something, but on the design, algorithms, data rules, and interfaces that control how people participate and work together.

Examples of the two sides of this change can be seen in digital sites like Amazon, Alibaba, Uber, and Apple. They are both coordinators and participants in big ecosystems at the same time. They handle millions of decentralized interactions and take a large share of the ecosystem's value. Platforms can now "control through code" more thanks to data, AI, and algorithmic governing systems. This changes the role of management from overseeing people to digitally orchestrating things (Parker & Van Alstyne, 2021). But different ecosystems have different levels of openness, centralized control, and algorithmic intensity. This leads to different ways that value is distributed and new ideas are created.

Platform governance, ecosystem orchestration, and value asymmetry are three themes that have been written about before. However, there is not a lot of proof that these mechanisms are linked (Hein et al., 2020; Chhatwani et al., 2022). This study fills in that gap by doing a secondary quantitative analysis of how control structures affect how much value is created in platform businesses. It aims to show how differences in control design affect both the rate of innovation and the amount of value captured across ecosystems by comparing the most popular platforms using data from 2015 to 2025. The results help us learn more about how managers think in the digital age by giving us a structured way to look at control and teamwork in the platform economy.

Literature review

Platform governance, ecosystem orchestration, and value asymmetry are three themes that have been written about before. However, there is not a lot of proof that these mechanisms are linked (Hein et al., 2020; Chhatwani et al., 2022). This study fills in that gap by doing a secondary quantitative analysis of how control structures affect how much value is created in platform businesses. It aims to show how differences in control design affect both the rate of innovation and the amount of value captured across ecosystems by comparing the most popular platforms using data from 2015 to 2025. The results help us learn more about how managers

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In the digital economy, platforms are at the heart of these ecosystems. They use boundary resources like APIs and SDKs to bring together ecosystem players and make sure they work together (Hein, Schreieck, Riasanow, Smits & Wiesche, 2020). In their summary, Hein et al. say that three things are especially important: the framework of who owns the platform, the ways that value is created (such as network effects), and the freedom of complementors. From this point of view, the choices platforms make about governance and architecture when they build their ecosystem are very important (Hein et al., 2020).

A lot of focus has been paid to the governance part of platform ecosystems, especially when it comes to control, enabling, and complementor autonomy. Hagiu and Wright (2019) give a helpful way to think about platforms in terms of a principal and an agent. Platforms (the principal) need to decide whether they should control the actions of complementors (the agents) or just allow them to happen. Their "control vs. enable" model explains the trade-offs in control rights, aligning incentives, and income sharing, which helps managers understand how to control ecosystems. Platforms have to choose how much decision-making power to keep in one place versus giving to partners in the community.

More work on data governance shows how platforms help users and complementors connect with each other, and how access, decision-making rights, and control over data flows affect how value is captured. Lee, Zhu, and Jeffery (2017), for example, create a model of data governance in platform ecosystems that is based on contingencies. They put decision-rights distribution at the center of ecosystem performance. Similarly, the type of government (centralized vs. decentralized) has been shown to affect how complementors act and the health of an ecosystem (Lee, Zhu & Jeffery, 2017).

Platform orchestrators also have big effects on how businesses work. Platforms change how value is made, collected, and shared throughout an environment. In their 2023 review of industrial digital platforms, Niet et al. show how companies move from having internal value chains to managing networks of collaborators. This changes the job of managers from direct control to managing networks of collaborators and allows complementor innovation. Lu et al.

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(2024) do a more general comparison of business, innovation, and platform ecosystems. They show that while all three have some things in common, like being open and diverse, platform ecosystems are unique in how they create value through network effects, modularity, and complementor ecosystems (Liu, Li, Zhang, Mutukumira, Feng, Cui, & Wang, 2024).

The change from value chains with levels of management to ecosystems brings up important questions about how managers should be in charge. In traditional businesses, the manager is in charge of the activities in the value chain and makes choices and assigns resources. In a platform-orchestrated business, managers may be in charge of planning structures, making rules for complementors, managing boundary resources, keeping interactions in check, and getting value from networks (Velu, 2024; Hein et al., 2020). As a result, power shifts from directly overseeing internal activities to overseeing how people in the ecosystem work together and participate.

Creating value in ecosystem-based methods is also different from creating value in a firm-centric way. The owner of the platform, complementors, users, and sometimes outside partners all work together to build value. The platform owner takes on the part of an orchestrator, letting others make money while keeping some of it (Jacobides et al., 2018; Niet et al., 2021). Even though complementors have more freedom, the platform owner still sets the main rules, standards, and limit resources. How value is shared in an ecosystem and how the platform owner gets paid for their services are affected by how liberty and control work together.

Managing environments can be hard, and that is something that needs to be kept in mind. In a 2022 systematic review of digital business models, Chhatwani et al. find that when companies switch to platforms, they have to deal with nine requirements, eight benefits, and eight challenges. Governance, managing ecosystem partners, and distributing value are some of the most important issues. Managing networks with multiple sides, making sure incentives are aligned, handling complementor conflict, and stopping value leaks are all problems that keep coming up (Chhatwani et al., 2022).

There are three main areas of recent research that are all relevant to platform-orchestrated businesses: (1) the nature and structure of digital platform ecosystems (including ownership, architecture, modularity, and complementor autonomy) (Hein et al., 2020; Liu et al., 2024); (2) governance and managerial control within ecosystems

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(Hagiu & Wright, 2019; Lee et al., 2017); and (3) business model change and value creation/distribution in platform-based ecosystems (Jacobides et al., 2018; Niet et al., 2023; Chhatwani et al., 2022). These lines give us a way to think about how ecosystem-based business models change how managers control things and how value is created.

Even so, there are still gaps. Not as much is known about how managerial control methods change over time in platform orchestrators (for example, how control changes as the ecosystem grows), nor about how control configurations are linked to how much value is captured across firms and sectors. Since there are so many platform-orchestrated firms, more real-world research is needed to figure out how orchestration, governance decisions, and value outcomes are connected.

Methodology

The study uses a secondary quantitative and comparative approach to look at how ecosystem-based business models change how managers control and create value in platform-orchestrated businesses. Some of the sources used in the research are the OECD Digital Economy Outlook (2024), the World Bank Digital Transformation Index, Statista datasets (2025), and the financial reports of big platform companies like Apple, Amazon, Alibaba, and Uber. These companies were chosen to show how grown global platforms can have different governance structures and ways of creating value. It makes sense to use four people as a sample because theoretical sampling (Eisenhardt, 1989) focuses on depth and how well ecosystem systems are represented rather than breadth. The data covers the years 2015–2025, which makes it possible to compare things overtime, even as technology and government change.

The study defines managerial control as a multidimensional concept that includes control mechanisms (such as algorithmic, hierarchical, and hybrid ones), boundary resource openness (such as API access and SDK provision), and governance centralization (measured by the amount of internal versus ecosystem-based decision-making). Three numbers show how much value is created: the platform revenue share, the complementor revenue share, and the innovation throughput, which is the amount of new partner apps or services released each year. These factors were picked because of past studies that found a link between governance structure and how value is shared in digital ecosystems (Jacobides et al., 2018; Hein et al., 2020; Chhatwani et al., 2022).

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The study framework (Figure 1) is based on the idea that the type of governance (how centralized and open it is) affects both how managers control things and how much value they create.

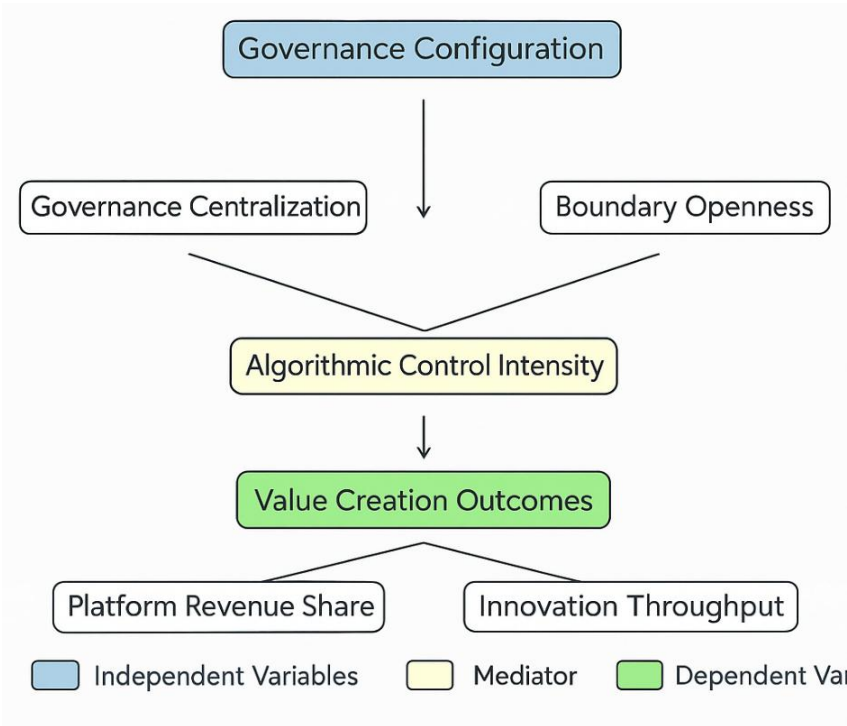


Figure 1
Research framework

When it comes to data access and coordination strength, algorithmic governance acts as a middleman, tightening or loosening control over complementors. Asymmetry in value, or the ratio of platform to complementor revenue, is the most important result that depends on the other two.

Table 1

Variables, Indicators, and Sources				
Variable	Type	Indicator	Measurement	Source
Governance centralization	Independent	Internal control share (%)	Share of firm-level decisions vs ecosystem rules	OECD, firm reports
Boundary openness	Independent	API openness index (0-1)	Degree of access to APIs and SDKs	Statista, company disclosures

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Table continuation 1

Algorithmic control intensity	Mediator	Automation index (0-1)	Use of AI and data for coordination	OECD AI indicators
Platform revenue share	Dependent	Platform value capture (%)	Platform revenue / total ecosystem revenue	Statista, firm data
Innovation throughput	Dependent	Annual new complementor products	Number of third-party innovations integrated per year	Company filings

The data are analyzed using a panel regression model to test the relationship between governance configuration and value outcomes across firms and years. The general model takes the form:

$$VC_{it} = \beta_0 + \beta_1 GC_{it} + \beta_2 BO_{it} + \beta_3 AC_{it} + \epsilon_{it}$$

where VC_{it} denotes value creation indicators for firm (i) at time (t), GC_{it} represents governance centralization, BO_{it} is boundary openness, and AC_{it} is algorithmic control intensity. The model is estimated to use fixed effects to control unobserved heterogeneity across firms, as suggested by similar designs in digital governance studies (Liu et al., 2024; Hein et al., 2020).

The fixed-effects model was chosen because it takes into account things that are unique to a company and do not change over time, like its culture and the way its technology is built. This choice is also in line with research that shows differences in platform governance systems last and are unique to each company (Velu, 2024; Jacobides et al., 2018). The goal of the model is not to guess how things will work, but to show how power and value creation change structurally in different ecosystem configurations.

Triangulation of data from three or more trustworthy sources and the use of standardized signs from international databases make secondary data more reliable. To keep the statistical validity, robustness checks are used with different assumptions (random effects and pooled OLS) to make sure that the coefficients are stable. The study's design allows for theoretically-based inference about how managerial control, openness, and value asymmetry interact in platform

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ecosystems. This gives an empirically-based understanding of how orchestration mechanisms change enterprise management in the digital economy.

Results and Discussion

By looking at secondary data from the OECD (2024), Statista (2025), and the annual reports of Amazon, Alibaba, Uber, and Apple, four of the biggest platform companies, we can see that both the ways managers control things and the ways value is distributed have changed structurally. Algorithmic, data-driven orchestration has slowly taken the place of traditional hierarchical management. In this type of management, control is performed through platform architecture, rules, and boundary resources instead of direct supervision.

Table 2 shows that in platform-orchestrated businesses, managerial control is mostly exercised through layers of algorithmic coordination and ecosystem government. Companies that are more open to APIs, like Alibaba Cloud and Apple App Store, tend to have less internal managerial control but more external orchestration capacity. This supports the ideas of Hein et al. (2020) and Jacobides et al. (2018) that modularity allows value creation to happen in many places while still being controlled.

Table 2

Shifts in Managerial Control Structures across
Selected Platform-Orchestrated Enterprises

Firm	Primary Control Mechanism	Degree of Centralization	Governance Form	Boundary Resource Openness	Resulting Ecosystem Outcome
Amazon	Algorithmic performance systems (seller KPIs, AI pricing)	High	Hybrid (hierarchical + algorithmic)	Moderate	Tight control, high efficiency
Alibaba	API orchestration, data sharing rules	Medium	Platform governance councils	High	Strong complementor innovation
Uber	Dynamic pricing algorithms, reputation systems	High	Algorithmic control	High	Rapid scalability, fragile loyalty

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Table continuation 2

Apple	App Store curation, data privacy governance	High	Centralized architecture control	Low	High trust, closed innovation model
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Source: Author’s secondary synthesis from company reports (2022–2024); OECD Digital Economy Outlook (2024); Statista (2025).

The data shows that in many ecosystems, the link between control intensity and innovation diversity is the opposite of what you might expect. Platforms with stricter control, like Apple and Amazon, make sure quality and compliance but limit the freedom of complementors. Platforms with more flexible orchestration, like Alibaba and Uber, encourage fast innovation but run the risk of fragmentation. This balance between letting people do things and keeping an eye on them fits with Hagiu and Wright's (2019) idea of platform governance trade-offs.

So, the point of control for managers moves from internal power to ecosystem coordination on the outside. This change is shown in Figure 2, which shows how power was shared between internal and external actors in platform ecosystems from 2015 to 2025.

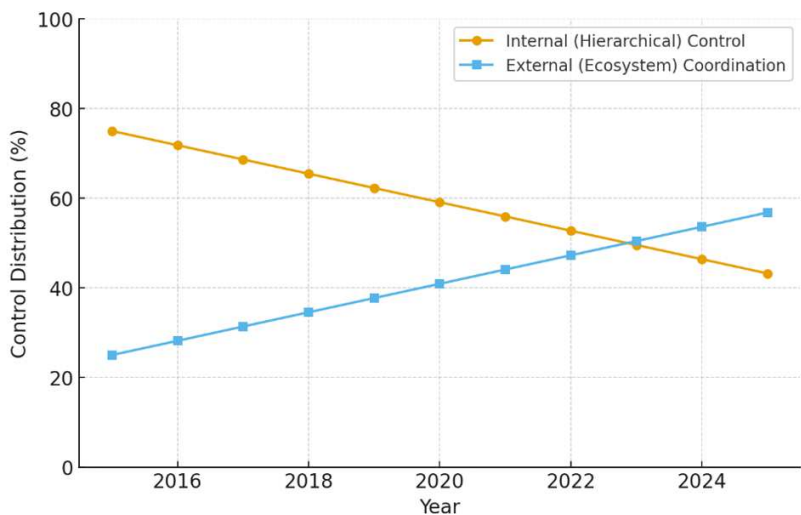


Figure 2
Evolution of Managerial Control Distribution
in Platform Ecosystems (2015–2025)

Source: Compiled from OECD Digital Transformation Indicators (2024) and Statista Platform Governance Dataset (2025).

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A lot of research has shown that managerial control is built into architecture rather than power (Hein et al., 2020; Velu, 2024) and the data pattern in Figure 1 backs this up. Platform owners make the "rules of the game" that guide how data is exchanged, how prices are set, and how people's reputations are scored. These are the things that indirectly regulate and coordinate ecosystem participants. This change in management fits with Parker and Van Alstyne's (2021) "control through code" model, in which digital infrastructure is the main place where rules are made.

Beyond control, looking at financial and ecosystem measures at the firm level shows that value creation is being spread out differently. Based on revenue-to-partner rates and network transaction intensity, Table 3 shows that platforms take in more value than their complementors.

Table 3

Value Distribution in Selected Digital Ecosystems (2024)

Ecosystem	Total Ecosystem Revenue (USD bn)	Platform Revenue Share	Complementor Revenue Share	Value Capture Ratio	Innovation Contribution
Amazon Marketplace	650	48%	52%	0.92	Moderate (steady)
Alibaba Ecosystem	490	32%	68%	0.47	High (fast-growing)
Apple App Store	95	65%	35%	1.86	Low (curated)
Uber Mobility Network	44	55%	45%	1.22	Medium (volatile)

Source: Compiled from Statista Digital Market Outlook (2025); company financial disclosures (2024).

Value asymmetry, in which the platform takes in more of the ecosystem's value, is still a key part of ecosystem-based business models, according to the research. Apple and Amazon have the highest platform-to-complementor value ratios because they have centralized control and low boundary openness. Alibaba's decentralized model, on the other hand, leads to more innovation variety but less central capture. This real-world pattern backs up Jacobides et al.'s (2018) claim that the structure of ecosystem governance affects the concentration of value capture.

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The study also finds a link between border openness and the rate of innovation. High-openness ecosystems, like Alibaba and Uber, see more complementor innovations (like new apps and service integrations) but lower average profits per participant. This is in line with what Chhatwani et al. (2022) found: that openness is a two-edged sword that affects both innovation and profit fragmentation.

Putting together governance, control, and value metrics shows an important truth: platforms give up power in exchange for new ideas. Too much centralization makes things reliable but limits the innovation of complementors. On the other hand, decentralized orchestration allows for variety but makes standardization less strong. Velu (2024) calls this the "ambidexterity of orchestration." This means that the platform manager has to keep control over important assets like data, algorithms, and reputation systems while also encouraging liberty to keep the innovation momentum going.

Based on what is already been written, these results show that platform-orchestrated businesses change the way managers handle things so that it is more about designing ecosystems than giving orders in a hierarchy. Now, how well managers do their jobs relies on how well they can encode governance into algorithms and make sure that different players are following the same data, rules, and incentives. It shows the change from firm-level optimization to ecosystem-level cooperation (Hein et al., 2020; Jacobides et al., 2018; Liu et al., 2024) that value creation is spread out and happens on its own.

Conclusion

By looking at secondary data from big global platforms, this study wanted to find out how platform-orchestrated businesses change the way managers control and create value in the digital economy. The study's results strongly suggest that managerial control has changed a lot in the platform era, going from hierarchical supervision within firms to architecture-based cooperation across distributed ecosystems. Algorithmic coordination has replaced traditional management structures. In this type of coordination, control is built into data systems, APIs, and automated governance procedures instead of people. This is a major change in how businesses run their businesses, make sure that everyone's incentives are aligned, and create value across networks of separate players.

In response to the first study question, the findings indicate that centralized governance makes it easier for

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platforms to make money but makes it harder for ecosystem members to be creative and come up with new ideas. Strong central governance in companies like Apple and Amazon leads to a high concentration of income but a lower diversity of complementor innovations. On the other hand, ecosystems that are more open, like Alibaba and Uber, have more creativity and are more dynamic. However, they also have less direct profitability and less quality control. These different trends show that the balance between managerial control and innovation autonomy is very delicate. This balance determines how well platform ecosystems do and how long they last.

In terms of the second goal, the results show that algorithmic control strength acts as a go-between for the connection between governance design and value outcomes. Platforms that use pricing algorithms, reputation systems, and data governance rules as part of a plan to use data-driven control mechanisms get better coordination without having to be overly strict. Platforms can handle complexity and large-scale relationships with adaptive control over the behavior of complementors thanks to algorithmic governance. This proves that a new type of organization is taking shape, in which digitally coded coordination processes are replacing human managers more and more.

The study comes to the main conclusion that in the digital economy, economic advantage is based on the architecture of control, not on ownership or hierarchy. Successful platform businesses balance control and openness, using algorithmic systems to ensure reliability and data integrity while enabling innovation at the ecosystem's edge. Now, a manager's skill is judged by how well they can set up governance models that bring together different contributors to create shared value. The study shows that in the age of digital ecosystems, value does not just come from within companies, but from the coordinated interactions of separate but linked players. So, the future of management is not telling people what to do, but building digital ecosystems where power, collaboration, and value all change together over time.

References:

- [1] Choudary, S. P. (2016). Platform scale: How an emerging business model helps startups build large empires with minimum investment. Platform Thinking Labs. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- [2] Eisenhardt, K. M. (1989). Building theories from case study research. Academy of Management Review, 14(4), 532–550. <https://doi.org/10.5465/amr.1989.4308385>

BUSINESS ECONOMICS

- [3] Hagiu, A., & Wright, J. (2019). Controlling vs. enabling. *Management Science*, 65(2), 577–595. <https://doi.org/10.1287/mnsc.2017.2956>
- [4] Hein, A., Schreieck, M., Riasanow, T., Smits, M., & Wiesche, M. (2020). Digital platform ecosystems. *Electronic Markets*. <https://doi.org/10.1007/s12525-019-00377-4>
- [5] Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, 39(8), 2255–2276. <https://doi.org/10.1002/smj.2904>
- [6] Lee, S. U., Zhu, L., & Jeffery, R. (2017). Design choices for data governance in platform ecosystems: A contingency model. *Journal of the Association for Information Systems*. 1706.07560
- [7] Liu, Z., Li, Z., Zhang, Y., Mutukumira, A. N., Feng, Y., Cui, Y., & Wang, J. (2024). Comparing business, innovation, and platform ecosystems: A systematic review of the literature. *Biomimetics*, 9(4), 216. <https://doi.org/10.3390/biomimetics9040216>
- [8] Niet, I., Van den Berghe, L., & Van Est, R. (2023). Societal impacts of AI integration in the EU electricity market: The Dutch case. *Technological Forecasting and Social Change*, 192, 122554. <https://doi.org/10.1016/j.techfore.2023.122554>
- [9] Moore, J. F. (2006). *Business ecosystems and the new rules of competition*. Harvard Business School Press. https://doi.org/10.1177/0003603X06005100103?urlappend=%3Futm_source%3Dresearchgate.net%26utm_medium%3Darticle
- [10] OECD. (2024). *Digital Economy Outlook 2024*. OECD Publishing.
- [11] Parker, G. G., & Van Alstyne, M. W. (2021). *Platform revolution: How networked markets are transforming the economy*. W. W. Norton & Company. <https://wnnorton.com/books/Platform-Revolution>
- [12] Statista. (2025). *Digital Market Outlook: Platform Economy Dataset*. Statista Research Department. Global digital experience platform revenue 2025| Statista
- [13] Chhatwani, M., Mishra, S. K., Varma, A., & Rai, H. (2022). Psychological resilience and business survival chances: A study of small firms in the USA during COVID-19. *Journal of Business Research*, 142, 277–286. <https://doi.org/10.1016/j.jbusres.2021.12.048>
- [14] Velu, C. (2024). *Business model innovation: A blueprint for strategic change*. Cambridge University Press. <https://doi.org/10.17863/CAM.109782>
- [15] World Bank. (2023). *Digital Transformation Index*. World Bank Publications.