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Linking product differentiation and hybrid innovation to enterprise performance: The mediating role of competitive advantage in the automotive components industry

Dudi[1], Heru Mulyanto[2]

[1,2]Magister Management, Universitas IPWIJA, Indonesia

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ABSTRACT

This study aims to analyze the influence of product differentiation and hybrid innovation on the performance of companies with competitive advantages as a mediating variable in the automotive component industry. The phenomenon of declining market share of PT XYZ, Bogor is the background for the urgency of this research. Using a quantitative approach, data was collected through a questionnaire from 100 respondents using a snowball sampling technique. Data analysis was carried out using the Partial Least Square-Structural Equation Modeling (PLS-SEM) method through SmartPLS 4 software. The results of the study show that product differentiation has a significant positive effect on the company's performance directly. In contrast, hybrid innovation does not have a direct effect on performance, but has a significant influence through the mediation of competitive advantage. These findings confirm that competitive advantage serves as a perfect mediator for hybrid innovation in boosting business performance. Practically, the company is advised to strengthen its competitive position through the integration of technology and product added value to achieve sustainable superior performance in the dynamic automotive market.

Corresponding Author:

Dudi,
Magister Management,
Universitas IPWIJA,
Letda Natsir No.7 Cikeas Nagrak. Kecamatan Gunung Putri, Kabupaten Bogor, Indonesia
Email: dudikarawang@gmail.com

1. Introduction

The automotive industry is a strategic manufacturing sector that makes a significant contribution to the national economy through labor absorption, technological innovation, and the creation of a company's extensive supply chain (Wijaya & Nartasari, 2022). In recent years, market dynamics triggered by the transformation of Industry 4.0 have demanded that companies no longer compete only on the price aspect. Automotive companies are now required to provide added value through unique product differentiation strategies and the adoption of environmentally friendly technological innovations such as hybrid systems. This phenomenon is reinforced by the shift in consumer preferences that are increasingly concerned about energy efficiency and intelligent connectivity in vehicles (Hofmann & Rüsch, 2017). Therefore, the ability of companies to adapt to global technology trends is a major determining factor in maintaining business relevance in a competitive market.

However, this demand for adaptation is not merely a trend but has evolved into a fundamental shift in how industrial operations are conducted. The automotive component industry faces unprecedented challenges in the digital transformation era. Hybrid innovation serves as a strategic imperative in Industry 4.0, evidenced by concrete indicators such as the convergence of physical manufacturing with digital services (CPS), the integration of eco-friendly energy systems with traditional combustion efficiency, and the necessity of real-time supply chain connectivity to meet dynamic consumer demands (King & Cnop, 2025).

Furthermore, this study contributes a novel conceptual framework by positioning competitive advantage as a full mediator for hybrid innovation. This addresses the 'innovation-performance gap' identified in previous research, where high-technology investments often fail to yield direct performance improvements without a robust competitive bridge to align innovation with market needs

Despite the theoretical importance of these strategic frameworks, empirical evidence often reveals a disconnect between strategic implementation and actual corporate outcomes. While investments in innovation and differentiation continue to be made, improving a company's performance often does not show a linear or consistent relationship. For example, PT XYZ, Bogor, experienced a decline in market share from 12% to 9.89% within three years despite launching new products. This gap indicates that there are inhibiting factors in the implementation of the strategy, such as the mismatch between product features and real market needs or the lack of optimal integration of new technologies. The problem of declining customer loyalty as reflected in the Net Promoter Score also shows that the value of product uniqueness has not been fully conveyed well to consumers. This triggers an urgency to re-evaluate how the strategies implemented can actually be converted into tangible performance outcomes.

Theoretically, the debate about the influence of product innovation on business performance still shows mixed results or experiences a research gap. Several previous studies have stated that product innovation has a significant positive effect on operational performance (Arshad Ali & Mahmood, 2024; Exposito & Sanchis-Llopis, 2018; Khalfallah et al., 2022; Tarigan, 2018), but other studies have found that the existence of new products is not able to improve performance if it ignores relational aspects and market needs (Zheng et al., 2022). The inconsistency of these findings suggests the need for mediating variables that can strengthen the relationship between strategic inputs and business outcomes. Competitive advantage then emerges as a crucial element that serves as a bridge to ensure differentiation and innovation strategies can generate long-term positive impacts (Ritahi & Echaoui, 2025). Without a solid competitive advantage, innovation efforts risk only becoming an operational burden without providing the expected economic benefits (Hajar et al., 2023; Onileowo et al., 2021; Yeboah, 2023).

The application of hybrid innovation in this context becomes particularly relevant because it offers a unique combination of cost efficiency and high differentiation (Gutiérrez-Broncano et al., 2024). Hybrid innovations that integrate the development of physical products with the added value of services have proven to be more effective in dealing with market uncertainty than single innovations (Daraboš Longin, 2025). This strategy allows companies to create barriers to entry for competitors while providing a total solution that is more adaptive to changing customer needs. In the midst of the VUCA (Volatile, Uncertain, Complex, Ambiguous) era, flexibility in managing internal resources to create hybrid innovations is a strategic imperative (Brinckmann et al., 2019; Buganza & Verganti, 2006; Fan et al., 2023; Kumar et al., 2024). Thus, companies can build a more resilient and sustainable market position through the creation of unique value that is difficult for competitors to replicate.

This study aims to fill the gap in the literature by analyzing the role of competitive advantage mediation in strengthening the influence of product differentiation and hybrid innovation on company performance. The focus of the study on PT XYZ, Bogor provides novelty value because it explores the internal dynamics of national manufacturing companies that are transitioning to environmentally friendly vehicle technology. The results of this study are expected to make a theoretical contribution to the development of strategic management as well as practical benefits for managers in formulating more effective policies. Through an in-depth understanding of this mediation mechanism, the company can optimize resource allocation to achieve superior performance in Indonesia's highly dynamic automotive market.

2. Research Method

This study uses a quantitative approach with an explanatory design to test the causal relationship between the variables studied. The main focus of this study is to analyze the influence of product differentiation and hybrid innovation on the performance of companies with competitive advantage as a mediating variable. The research location was conducted at PT XYZ, Bogor, a manufacturing company engaged in the automotive industry in Indonesia. The use of this research design allows researchers to validate theoretical models that have been built through empirical data in the field. Thus, the results of the analysis can provide an objective picture of the effectiveness of the company's strategy in improving its business performance.

The population in this study includes all spare parts suppliers in the Bogor area, the exact number of which is unknown. Given the number of unidentified populations, the sampling technique used was snowball sampling to reach the target of 100 respondents. The sample size meets the minimum criteria of Structural Equation Modelling (SEM) analysis, which requires a data amount between 100 to 200 or at least five times the number of research indicators (Wolf et al., 2013) Primary data collection was carried out by distributing questionnaires online through WhatsApp groups relevant to the relevant industry ecosystem. This procedure ensures that the participating respondents have a background and knowledge appropriate to the operational context of the automotive industry.

The research instrument in the form of a questionnaire was designed using the Likert scale to measure respondents' perception of four main variables. These variables include product differentiation, hybrid innovation, competitive advantage, and company performance which are described into 14 operational indicators. To ensure empirical validity, the research employs 14 indicators derived from the Resource-Based View (RBV) and Strategic Management theories. These indicators are distributed across four core variables: Product Differentiation, measured through Quality, Features, and Design(Keller & Kotler, 2015). Hybrid Innovation, encompassing Technology Combination, Cross-functional Integration, and Systemic Innovation(Tidd & Bessant, 2014). Competitive Advantage, focused on Inovation, Quality, Price, delivery and time market(Farida & Setiawan, 2022) (Correia et al., 2020) and Firm Performance, evaluated via Market Share, Sales Volume, and Customer Loyalty(Narver & Slater, 1990)

Before the in-depth analysis, the instrument is tested through validity and reliability tests to ensure the accuracy and consistency of the data collected. Validity tests are measured through outer loadings and Average Variance Extracted (AVE), while reliability is measured by Cronbach's Alpha and Composite Reliability (Hair et al., 2019). This stage is crucial in quantitative research to minimize measurement errors that can distort the final analysis results.

The data analysis method used in this study is Partial Least Square - Structural Equation Modelling (PLS-SEM) by leveraging SmartPLS 4 software. This analysis technique was chosen because of its ability to handle complex research models with mediating variables and relatively small sample sizes (da Silva Castanheira et al., 2023; Goodhue et al., 2012; Sosik et al., 2009). Model evaluation is carried out through two stages, namely the assessment of the measurement model (outer model) and the assessment of the structural model (inner model). The inner model assessment was focused on the R-square, f-square, and path coefficient significance values through the bootstrapping process. The use of PLS-SEM provides high flexibility in testing hypotheses without requiring strict data normality assumptions as in covariance-based SEM techniques.

Hypothesis testing was carried out by looking at p-value and t-statistics to determine the significance of direct or indirect influences. The significance threshold set is 0.05, where the hypothesis is accepted if the p-value is smaller than the number. In addition to direct influences, this study also analyzes specific indirect effects to understand the role of competitive advantage as a mediator in the model. This mediation analysis is essential to uncover the internal mechanisms of how input strategies are converted into superior organizational performance. Through this systematic methodology, it is hoped that the conclusions produced have a high level of scientific validity and can be accounted for.

Table 1. Respondent demographics

Demographics	Items	Amount	%
Business Field	Manufactory	56	56%
	Automotive/Automotive Component Production	38	38%
	Stamping Metal & Injection	6	6%
Departments	Operator / Administration / Staff	50	50 %
	Leader / Kasie / Team Leader	19	19 %
	Marketing (Staff & Leader)	19	19 %
	Student Internship / Internship	12	12 %
Period of Operation	< 1 Year	6	6 %
	1 - 15 Years	13	13 %
	16 - 25 Years	31	31 %
	26 - 35 Years	50	50 %

It can be seen in table 1 that the respondents are companies with similar fields, with questionnaire fillers in various divisions with the majority of business periods between 26-35 years. This illustrates the long business in the automotive sector in Bogor area.

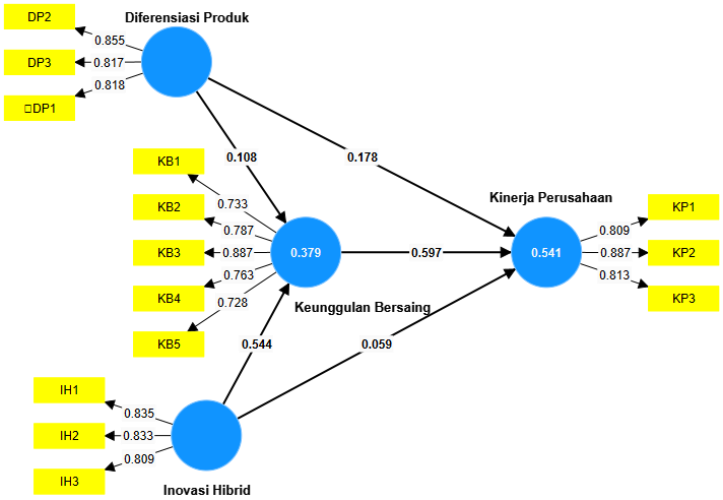

Figure 1. outer loading and validity of research variables

From figure 1, it can be seen that the outer lending value of each variable is above 0.7. Reliability is reflected in the following HTMT values.

Table 2. Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Product Differentiation (DP)	0.776	0.788	0.869	0.689
Hybrid Innovation (IH)	0.768	0.775	0.865	0.682
Competitive Advantage (KB)	0.840	0.848	0.887	0.611
Company Performance (KP)	0.785	0.787	0.875	0.701

The Discriminan validity value is represented by the HTMT value as follows:

Table 3. HTMT (hetero-trait mono trait)

	Product Differentiation	Hybrid Innovation	Competitive Advantage	Company Performance
Product Differentiation (DP)				
Hybrid Innovation (IH)	0.792			
Competitive Advantage (KB)	0.531	0.747		
Company Performance (KP)	0.596	0.670	0.873	

After meeting the requirements for smart PLS data processing, the model is operated bootstrap with the results as seen in table 2.

3. Result and Discussion

Table 4. Hypotesys test

Hyp	Construct relation	Original Sample (O)	Sample mean (M)	Standard deviation	T statistic	P value	Decission
H1	Product Differentiation → Company Performance	0,178	0,193	O,100	1,789	0,037	Accepted
H2	Hybrid Innovation → Company Performance	0,059	0,047	0,125	0,471	0,319	Rejected
H3	Product Differentiation → Competitive Advantage	0,108	0,115	0,116	0,929	0,177	Rejected
H4	Hybrid Innovation → Competitive Advantage	0,544	0,546	0,104	5,218	0,000	Accepted
H5	Competitive Advantage → Company Performance	0,597	0,602	0,110	5,421	0,000	Accepted
H6	Product Differentiation → Competitive Advantage → Company Performance	0,064	0,069	0,072	0,898	0,185	Rejected
H7	Hybrid Innovation → Competitive Advantage → Company Performance	0,325	0,332	0,098	3,310	0,000	Accepted

Based on the results of *the Structural Equation Modelling* (SEM) analysis using SmartPLS, the model test showed that the product differentiation strategy had a positive and significant influence on the company's performance at PT XYZ, Bogor. This is evidenced by the path coefficient value of 0.178, the t-statistical value of 1.789, and the p-value of 0.037 which is below the threshold of 0.05. On the other hand, interesting findings emerged in the hybrid innovation variable which directly did not have a significant influence on the company's performance with a p-value of 0.319. However, hybrid innovation has been proven to have a very strong and significant direct influence on competitive advantage with a path coefficient of 0.544 and a p-value of 0.000. Competitive advantage itself is the main determining factor for performance with the largest influence value of 0.597 and a very high level of significance. Overall, this model confirms that competitive advantage is a crucial element that determines the success of a company's strategy in the automotive market.

Mediation effect testing shows the different roles between competitive advantage as a link of independent variables to performance. The results of the analysis of *specific indirect effects* revealed that competitive advantage significantly mediated the influence of hybrid innovation on company performance with a p-value of 0.000. In contrast, the mediating role of competitive advantage in the relationship between product differentiation and company performance was declared insignificant because the p-value of 0.185 exceeded the limit of 0.05. This indicates that hybrid innovation requires a "vehicle" in the form of a competitive advantage to have a real impact on business performance, while product differentiation can be directly felt by the company. In total, the influence of hybrid innovation on performance became significant (0.383) when the mediation pathway was taken into account in the model. These findings underscore the importance of integrating innovation capabilities with value-creation strategies that are difficult for competitors to replicate.

The significant influence of product differentiation on the company's performance at PT XYZ, Bogor shows that the uniqueness of product features and quality remains the main weapon in the automotive manufacturing industry (Andrean & Ilyas, 2020). These findings are in line with strategic management theory which states that differentiation strategies allow companies to obtain better margins and stronger customer loyalty (Hidayat, 2023). In the context of this company, the focus on premium parts quality and unique product features has proven to be able to contribute directly to 17.8% of performance achievement. These results also support previous research that emphasized that in the midst of environmental uncertainty, companies that are consistent on differentiation tend to have better resilience. Therefore, investment in product-specific design and excellence remains a relevant strategic priority to drive business performance in a sustainable manner.

The insignificant phenomenon of the direct influence of hybrid innovation on performance provides new insights that advanced technological innovations do not necessarily guarantee immediate financial gains. This can be due to the high initial investment costs and the risk of operational disruption that often accompanies the implementation of new technologies in the manufacturing sector. Some studies have found that technological innovations that are not supported by the right market strategy can actually increase risk-taking capacity which negatively impacts short-term performance (Magessi & Antunes, 2020). However, the role of hybrid innovation becomes vital when it is linked to competitive advantage, where this innovation is able to create barriers to entry for competitors through the integration of processes and services. Thus, hybrid innovation at PT XYZ, Bogor serves more as a long-term strategic foundation than an instant profit driver.

This strategic positioning is crucial because failing to align innovation with market-based advantages can lead to detrimental financial outcomes. The analysis reveals that hybrid innovation does not possess a significant direct effect on performance, highlighting a critical strategic boundary. Focusing on innovation without established competitive advantage leads to a 'cost center trap,' where high R&D expenditures increase operational burdens without enhancing market value, potentially resulting in transactional gains that are easily eroded by competitors.

To avoid this trap, the empirical data suggests that the value of innovation must be channeled through a robust competitive framework. The importance of the mediating role is further emphasized by the statistical results. The path coefficient of 0.597 indicates that competitive advantage is the primary driver of performance. This implies that management at PT Nandya Karya Perkasa must prioritize strategic positioning and unique value propositions as 'mediating vehicles' to ensure that technological and hybrid investments successfully translate into sustainable financial and market growth

Ultimately, this statistical evidence solidifies the theoretical premise regarding the interdependence of technology and market positioning. The role of competitive advantage as the perfect mediator for hybrid innovation confirms that the effectiveness of new technologies depends heavily on their ability to create unique value in the eyes of the market. Innovations that combine physical features with integrated after-sales service have proven to strengthen the company's competitive position before ultimately leading to an increase in sales volume and market share. Competitive advantages achieved through hard-to-replicate cost efficiencies and close customer relationships are factors that validate why hybrid innovation remains necessary (Piñera-Salmerón et al., 2023). These findings provide managerial implications that companies should focus on integrating innovation into a robust business model through instruments such as *the Business Model Canvas*. Overall, this study proves that the synergy between differentiation strategies and innovation mediated by competitive advantage is the main key to achieving superior performance in the automotive industry.

4. Conclusion

This research has succeeded in proving that the company's performance at PT XYZ, Bogor is significantly influenced by product differentiation strategies and competitive advantages. Key findings show that product differentiation has a positive direct impact on performance, confirming that the uniqueness of product features remains an important determinant in the automotive components industry. In contrast, hybrid innovation was found to have no direct influence on company performance, but had a very strong influence through the mediation of competitive advantage. This confirms that investment in hybrid innovation technology requires achieving a strong competitive position first before it can be converted into financial and operational gains. Therefore, competitive advantage acts as a crucial bridge or full mediator for hybrid innovation to be able to boost business performance effectively.

Theoretically, this study strengthens the Resource-Based View (RBV) framework by showing that unique and innovative corporate resources must be strategically managed to create competitiveness. PT XYZ's success in maintaining performance in the midst of market fluctuations is highly dependent on its ability to synergize process innovation with product added value. The failure of hybrid innovation to directly affect performance provides an important lesson that technological sophistication alone is not enough without market acceptance and cost efficiency. The results of this study provide a comprehensive overview of the internal mechanisms of how input strategies (differentiation and innovation) are processed through competitive advantage to produce outputs in the form of superior organizational performance. Thus, the integration between product creativity and market positioning strength is key to business sustainability in the manufacturing sector.

Based on the results of the research, the management of PT XYZ, Bogor is advised to focus more on strengthening differentiation strategies that have a direct correlation with performance improvement. Companies need to conduct market research on a regular basis to ensure that the unique features developed truly address customers' pain points in today's automotive industry. In addition, given that hybrid innovation requires the mediation of competitive advantage, companies must ensure that the adoption of new technologies is accompanied by competitive marketing strategies and operational efficiencies. The previously observed decline in market share can be mitigated by highlighting after-sales service and product reliability as part of a brand identity that is difficult for competitors to replicate.

While this study provides comprehensive insights into the role of competitive advantage, it is not without limitations. To enrich the conceptual model in the future, researchers should incorporate additional variables such as 'Market Turbulence' or 'Digital Maturity' as moderators. Such additions would provide a deeper understanding of how external environmental shifts and internal digital readiness affect the overall efficacy of hybrid innovation strategies in volatile emerging markets. Furthermore, considering that the automotive industry is heavily influenced by "green policies," adding "Government Regulatory Support" as a variable would provide a more holistic view of the ecosystem.

The most relevant future research agenda to deepen this mediation model lies in exploring the "Black Box" of the innovation-to-performance process through longitudinal studies. This would allow researchers to observe the time-lag effect of hybrid innovation investments. Additionally, moving beyond a single-case study by involving a broader sample of automotive component companies will improve the generalization of the results. The use of qualitative methods, such as in-depth interviews, is also recommended to identify specific organizational barriers in implementing hybrid systems. Finally, future

research may consider more diverse non-financial performance indicators, such as "Environmental Sustainability Indices," to align with global ESG (Environmental, Social, and Governance) trends in the automotive manufacturing sector.

References

Andrean, A., & Ilyas, M. (2020). Pengaruh Kualitas Produk, Harga dan Promosi Terhadap Penjualan Pada CV. Ferdian Decoration Bekasi. *Jurnal Satya Mandiri Manajemen Dan Bisnis*, *6*(2), 37–54.

Arshad Ali, A., & Mahmood, A. (2024). How Do Supply Chain Integration and Product Innovation Capability Drive Sustainable Operational Performance? *Sustainability (Switzerland)*, *16*(1). https://doi.org/10.3390/su16010277

Brinckmann, J., Villanueva, J., Grichnik, D., & Singh, L. (2019). Sources of strategic flexibility in new ventures: An analysis of the role of resource leveraging practices. *Strategic Entrepreneurship Journal*, *13*(2), 154 – 178. https://doi.org/10.1002/sej.1313

Buganza, T., & Verganti, R. (2006). Life-cycle flexibility: How to measure and improve the innovative capability in turbulent environments. *Journal of Product Innovation Management*, *23*(5), 393 – 407. https://doi.org/10.1111/j.1540-5885.2006.00212.x

Correia, R. J., Dias, J. G., & Teixeira, M. S. (2020). Dynamic capabilities and competitive advantages as mediator variables between market orientation and business performance. *Journal of Strategy and Management*, *14*(2), 187–206. https://doi.org/10.1108/JSMA-12-2019-0223

da Silva Castanheira, K., Zahedi, N., & Miocevic, M. (2023). Bayesian Mediation Analysis in Trauma Research. *Psychological Trauma: Theory, Research, Practice, and Policy*, *16*(1), 149–157. https://doi.org/10.1037/tra0001439

Daraboš Longin, M. (2025). Navigating Dynamic Environments in Search for Sustainable Growth. *IBIMA Business Review*, *2025*. https://doi.org/10.5171/2025.233921

Exposito, A., & Sanchis-Llopis, J. A. (2018). Innovation and business performance for Spanish SMEs: New evidence from a multi-dimensional approach. *International Small Business Journal: Researching Entrepreneurship*, *36*(8), 911–931. https://doi.org/10.1177/0266242618782596

Fan, Z., Zhai, X., & Wu, D. (2023). Exploring the Roles of Social Networks and Absorptive Capacity in Local Firms' Strategic Flexibility: An Empirical Investigation of Chinese Firms. *Science, Technology and Society*, *28*(3), 407 – 427. https://doi.org/10.1177/09717218231178277

Farida, I., & Setiawan, D. (2022). *Business Strategies and Competitive Advantage : The Role of Performance and Innovation*. 1–16. https://doi.org/10.3390/joitmc8030163

Goodhue, D. L., Lewis, W., & Thompson, R. (2012). Does pls have advantages for small sample size or non-normal data? *MIS Quarterly: Management Information Systems*, *36*(3), 981–1001. https://doi.org/10.2307/41703490

Gutiérrez-Broncano, S., Linuesa-Langreo, J., Rubio-Andrés, M., & Sastre-Castillo, M. Á. (2024). Can hybrid strategy improve SME performance? The role of innovation and adaptive capacity. *European Journal of Innovation Management*, *27*(9), 173–197. https://doi.org/10.1108/EJIM-07-2023-0566

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *MULTIVARIATE DATA ANALYSIS EIGHTH EDITION*. www.cengage.com/highered

Hajar, M. A., Ibrahim, D. N., Darun, M. R., & Al-Sharafi, M. A. (2023). The Role of Emerging Technologies in Shaping the Value Innovation Aptitude Toward Competitive Advantage and Sustainability. In D. Z. C., O. A., & A. G. (Eds.), *Lecture Notes in Information Systems and Organisation* (Vol. 60, pp. 153–164). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-24775-0_9

Hidayat, D. (2023). *Pengaruh Inovasi Proses, Inovasi Produk, Dan Komitmen Organisasi Pada Kinerja Operasional Perusahaan (Studi Pada Usaha Mikro Dan Usaha Kecil Di Daerah Istimewa Yogyakarta)*. Universitas Islam Indonesia.

Hofmann, E., & Rüsch, M. (2017). Industry 4.0 and the current status as well as future prospects on logistics. *Computers in Industry*, *89*, 23–34.

Keller, K. L., & Kotler, P. (2015). Holistic marketing: a broad, integrated perspective to marketing management. In *Does marketing need reform?: Fresh perspectives on the future* (pp. 308–313). Routledge.

Khalfallah, M., Ben Salem, A., Zorgati, H., & Lakhal, L. (2022). Innovation mediating relationship between TQM and performance: cases of industrial certified companies. *TQM Journal*, *34*(3), 552–575. https://doi.org/10.1108/TQM-01-2021-0019

King, K. A., & Cnop, A. (2025). Transformation in the automotive sector: The management challenges of AI and the digital revolution. In *Navigating the 21st Century Business World: Case Studies in Management* (pp. 203–217). LSE Press. https://doi.org/10.31389/lsepress.nbw.o

Kumar, G., Vijay Raja, R., & Vel Murugan, T. (2024). Sustainable HR practices to overcome challenges of VUCA and recession times. In *VUCA and Other Analytics in Business Resilience, Part B*. Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-83753-198-120241002

Magessi, N. T., & Antunes, L. (2020). Influences of Innovation in Market Value. In V. H., B. M., B. G., & W. N. (Eds.), *Springer Proceedings in Complexity* (pp. 291–305). Springer. https://doi.org/10.1007/978-3-030-34127-5_28

Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*,

54(4), 20–35.
Onileowo, T. T., Muharam, F. M., Ramily, M. K., & Khatib, S. F. A. (2021). The Nexus between innovation and business competitive advantage: A conceptual study. *Universal Journal of Accounting and Finance*, *9*(3), 352–361. https://doi.org/10.13189/ujaf.2021.090309
Piñera-Salmerón, J., Sanz-Valle, R., & Jiménez-Jiménez, D. (2023). Product and business process innovation, competitive advantage and export performance. *Multinational Business Review*, *31*(4), 545–564. https://doi.org/10.1108/MBR-03-2022-0045
Ritahi, O., & Echaoui, A. (2025). Enhancing Business Performance of Industrial Companies in Morocco: The Role of Innovation and Competitive Advantage. In L. S.N., A. F.M., & L. M. (Eds.), *Lecture Notes in Networks and Systems: Vol. 1330 LNNS* (pp. 192–206). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-86698-2_18
Sosik, J. J., Kahai, S. S., & Piovoso, M. J. (2009). Silver bullet or voodoo statistics?: A primer for using the partial least squares data analytic technique in group and organization research. *Group and Organization Management*, *34*(1), 5–36. https://doi.org/10.1177/1059601108329198
Tarigan, Z. J. H. (2018). The impact of organization commitment to process and product innovation in improving operational performance. *International Journal of Business and Society*, *19*(2), 335–346. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85052869736&partnerID=40&md5=da64218173e06dca359f4cbf61e9787e
Tidd, J., & Bessant, J. R. (2014). *Strategic innovation management*. John Wiley & Sons.
Wijaya, O. Y. A., & Nartasari, D. R. (2022). The role of supply chain management on indonesian small and medium enterprise competitiveness and performance. *Uncertain Supply Chain Management*, *10*(1), 109–116. https://doi.org/10.5267/j.uscm.2021.10.005
Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety. *Educational and Psychological Measurement*, *73*(6), 913–934. https://doi.org/10.1177/0013164413495237
Yeboah, A. (2023). Innovation process model: An integration of innovation costs, benefits and core competence. *Cogent Business and Management*, *10*(1). https://doi.org/10.1080/23311975.2023.2176445
Zheng, S., Qian, L., & Yang, P. (2022). Attributes of product advantage and choices for manufacturer–retailer formal governance: the case of new product launch. *Asia Pacific Journal of Marketing and Logistics*, *34*(8), 1761–1777. https://doi.org/10.1108/APJML-05-2021-0366