

The Effect of Marketing Flexibility on Sustainable Marketing Orientation in the Automotive Sector

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Abstract – This study examines the relationship between marketing flexibility and sustainable marketing orientation in the automotive industry. Conducted with 392 automotive sector employees in Konya, the research reveals that marketing flexibility significantly and positively influences sustainable marketing orientation. Regression analysis indicates that marketing flexibility explains 75% of the variance in sustainable marketing orientation. Demographic analysis shows that female employees demonstrate higher perception of marketing flexibility compared to male counterparts, while married employees exhibit more positive perceptions of both marketing flexibility and sustainable marketing orientation. Educational level appears to have no significant impact on either variable. The findings suggest that marketing flexibility serves as a critical prerequisite for successful implementation of sustainable marketing practices in the automotive sector. Consequently, businesses should develop adaptable marketing strategies capable of responding to evolving market conditions while integrating sustainability objectives as core components of their strategic approach.

Keywords – Marketing adaptability, sustainable marketing orientation, automotive industry.

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1. Introduction

The intensification of competition in the contemporary business landscape compels enterprises to develop novel strategies to secure competitive advantage. For companies operating in dynamic and technologically sensitive sectors, such as the automotive industry, the flexibility of marketing strategies is of critical importance. Marketing adaptability refers to an organization's capacity to rapidly adjust to changing customer demands, technological innovations, and market dynamics. In this context, marketing adaptability is not only crucial during periods of crisis but also essential for establishing a competitive edge and fostering sustainable growth. In parallel with these developments, sustainability has become an integral component of modern business philosophy and marketing strategies. Principles such as environmental sensitivity, social responsibility, and economic sustainability now constitute fundamental elements shaping marketing activities. Consequently, sustainable marketing orientation has emerged as a strategic instrument that enables firms to maintain competitive standing while simultaneously responding to societal expectations.

This study examines the relationship between marketing adaptability and sustainable marketing orientation in the automotive sector. The primary objective of the research is to examine the effect of marketing adaptability on sustainable marketing orientation. In line with this objective, the relevant concepts were first examined within a theoretical framework, followed by a comprehensive literature review. In the empirical section of the study, findings derived from the analysis of data collected via a survey administered to employees in the automotive industry in the province of Konya, Türkiye, are presented. In the final section of the study, these findings are interpreted, and conclusions and recommendations are provided.

2. Conceptual Framework

In this section of the study, the fundamental concepts guiding the research are addressed. First, marketing adaptability within the automotive sector is examined, followed by a detailed analysis of sustainable marketing orientation. Furthermore, this section examines the relationship between marketing adaptability and sustainable marketing orientation, emphasizing the significance of this relationship for businesses' strategic decision-making processes.

2.1. Marketing Adaptability in the Automotive Sector

Technological advancements and growing environmental concerns are instigating profound transformations across numerous sectors, particularly the automotive industry. This shift has necessitated a comprehensive re-evaluation of various elements, from production processes to material selection. Trends such as rising vehicle demand, a shift towards electric vehicles, and the use of lightweight materials require the sector to align with sustainability and performance objectives. The increasing use of aluminum, in particular, plays a decisive role in shaping the carbon footprint of the automotive industry [1]. Furthermore, the integration of Automated Guided Vehicles (AGVs) into production lines enhances manufacturing flexibility and logistics performance [2]. Evolving technologies and changing consumer expectations continuously compel innovation within the automotive industry. Advanced technological developments, such as the use of ceramic materials to achieve goals including improved engine performance and fuel efficiency, play a critical role in achieving the sector's sustainability targets [3]. These technologies contribute to reducing environmental impact while simultaneously enhancing vehicle performance. Overall, the automotive industry is evolving towards a structure that is both competitive and environmentally friendly through the integration of technology and marketing strategies. This dynamic framework drives the sector to innovate and respond swiftly to market demands.

In an era of constantly shifting global economic balances, the ability of industries to adapt to international markets is of critical importance. The automotive sector, by virtue of its marketing adaptability, possesses the capacity to rapidly assess and respond to regional demands and economic conditions. In this sector, which is dominated by multinational enterprises, collaborations with local suppliers and technology transfers enhance the flexibility of production processes while offering cost-effective solutions [4].

Furthermore, mergers and acquisitions within the sector enable companies to strengthen their competitive position in global markets [5]. This flexibility not only strengthens the resilience of the automotive industry against economic fluctuations but also creates opportunities for innovation and sustainable growth.

The Industrial Revolution and subsequent technological advancements have formed the cornerstone of the modern automotive industry, fundamentally transforming its production processes. While automobile manufacturing was initially limited and costly, the sector gained significant momentum with the adoption of mass production techniques. The introduction of assembly line production in the 20th century made automobile manufacturing more flexible and laid the groundwork for the diversification of marketing strategies. Analyzing the role of innovation in the historical trajectory of the automotive industry, including the successes and shortcomings of industrial policies in countries such as Canada, highlights the importance of comparing different national approaches [6]. In this context, the case of South Africa emphasizes the role of human resource development and foreign investment in the sector, revealing key strategic steps for sustainable growth [7]. Thus, the historical development of the automotive industry has been shaped not only by technological progress but also by economic and social policy dynamics. This process has witnessed significant milestones that have profoundly altered human - machine - environment interaction. Advancements in information and communication technologies, along with the proliferation of innovative manufacturing methods such as additive manufacturing, have significantly influenced production processes and product design in the automotive industry. These developments enhance production flexibility and enable the creation of customized vehicles [8]. Furthermore, the strategic importance of new product development and innovation has necessitated a re-evaluation of traditional, rigid approaches to project management. In particular, innovative projects in engineering fields challenge conventional project management models, making the adoption of dynamic and flexible management principles imperative [9]. These milestones have played a critical role in the technological transformation of the automotive industry and continue to guide the future of the sector.

The intensification of competition in global markets is fostering new pursuits in sustainability and environmental responsibility within the automotive sector. Companies have begun implementing comprehensive strategies to reduce their carbon footprint and develop environmentally friendly production processes.

In Türkiye and globally, the transparent reporting of carbon emission data plays a critical role in monitoring sustainability performance [10]. Furthermore, advancements in renewable energy technologies and energy - efficiency - oriented approaches are accelerating the transformation of the automotive industry [11]. These developments facilitate the adoption of innovative solutions not only in production processes but also in product design and supply chain activities. Consequently, industry players are reconfiguring their marketing strategies in line with environmental awareness and technological progress, thereby preparing for the future in a more flexible and adaptable manner.

The contemporary automotive industry faces significant strategic adaptation challenges due to rapidly changing market conditions and intensifying competition. Companies must develop flexible marketing strategies to respond to shifts in consumer demand and technological advancements. The competition between Honda and Yamaha in the Indonesian motorcycle market clearly illustrates the importance of marketing flexibility, Honda's market dominance of 78.7% compared to Yamaha's 20.4% share demonstrates the significant role of consumer preferences and innovation in the success of both brands [12]. Furthermore, in the automotive components manufacturing sector, the adoption of environmentally friendly and lean production practices has become a critical strategy not only for sustainability goals but also for cost efficiency. However, disruptions in areas such as raw material processing and outsourcing within the supply chain hinder the widespread adoption of these practices [13]. This situation underscores the critical importance of enhancing coordination and flexibility in marketing and production processes.

2.2. Sustainable Marketing Orientation

Rapidly changing market conditions and technological advancements are making it increasingly difficult for businesses to compete using traditional methods. In this context, the ability of companies to demonstrate flexibility in their strategic approaches is critical for achieving success. Marketing adaptability can be defined as a company's capacity to respond quickly and effectively to changes in the external environment. This concept plays a decisive role in managing shifts in customer demands, fluctuations in the competitive landscape, and uncertainties in market trends. Marketing adaptability is not only a reactive measure during crises, but also a proactive approach adopted to secure a sustained competitive advantage. Contemporary research indicates that flexible marketing strategies positively influence both customer satisfaction and business performance [14].

Consequently, marketing adaptability emerges as a key element for achieving sustainable growth.

The effective implementation of marketing adaptability is contingent upon the interaction of numerous internal and external factors. A company's resource management and outsourcing decisions are shaped by cost pressures, the availability of required capabilities, and the need for flexibility. The reputational risks and challenges in finding suitable suppliers that sales managers encounter during this decision-making process can limit the rapid and effective adaptation of marketing strategies [15]. Furthermore, factors such as the implementation of integrated management systems, efficient resource utilization, and enhanced employee motivation contribute significantly to the effectiveness of marketing activities [16]. In this context, marketing adaptability can only be achieved not solely through operational decisions, but through a holistic consideration of corporate culture and management philosophy. Accordingly, businesses can swiftly adapt to changing market conditions and secure a sustainable competitive advantage.

In today's world, characterized by volatile economic conditions and pervasive uncertainty, developing flexible marketing strategies has become imperative for business survival and the attainment of competitive advantage. A primary benefit of marketing adaptability is enabling companies to respond effectively to shifts in consumer needs and behaviors by making rapid adjustments during crises. Particularly with the proliferation of digital technologies, companies are enhancing organizational transparency and strengthening customer loyalty [17]. Furthermore, marketing adaptability is closely linked to human resource management within organizations. Sustained employee motivation is among the critical factors that enhance a company's flexibility [18]. In this context, marketing adaptability not only facilitates alignment with market conditions but also enables sustainable growth and the attainment of a lasting competitive advantage. However, for businesses to achieve sustainable success, merely possessing a flexible structure is insufficient; this flexibility must also be managed appropriately and in a measured manner. While marketing adaptability allows companies to quickly respond to customer needs and market conditions, research has also shown that excessive flexibility can negatively impact market performance. Consequently, companies must adopt flexibility strategies in a balanced and deliberate manner.

On the other hand, marketing adaptability is a significant factor for customer satisfaction, and enhancing this flexibility strengthens customer loyalty and commitment [19]. As is well known, the most critical and indispensable component of marketing activities is, without a doubt, the customer.

In this regard, the primary motivation for conducting marketing activities within a sustainable framework is the customer segment referred to as “green consumers” [20]. In recent years, there has been a notable increase in the number of green consumers who prefer environmentally sustainable products and services over conventional non-sustainable alternatives. In conclusion, although marketing adaptability carries potential risks when applied in an imbalanced or non-targeted manner, when managed effectively, it provides businesses with a competitive advantage and the opportunity for sustainable growth.

2.3. The Relationship Between Marketing Adaptability and Sustainable Marketing Orientation

Marketing adaptability holds a significant place in the literature as an evolving concept. Early studies defined marketing adaptability as the ability of organizations to adapt to changing market conditions. For instance, previous research emphasized that adaptability is directly related to a company’s capability to respond swiftly to market demands [21], [22]. By the mid-1990s, the concept deepened, with findings suggesting that flexibility provides a strategic advantage. Subsequent studies indicated that flexible marketing strategies confer a competitive edge [23], [24]. From the early 2000s onwards, marketing adaptability gained a new dimension under the influence of technological advancements. Empirical evidence has shown that digital marketing and social media platforms enhance adaptability [25], [26]. Particularly during this period, the rapid change in customer demands required companies to continuously update their marketing strategies. More recent studies point to a post-2000s era that moved beyond traditional marketing methods [27], [28]. In recent years, marketing adaptability has expanded to include sustainability and ethical dimensions. Several studies have focused on explaining the effects of ethical concerns on marketing strategies [29], [30], [31]. Nowadays, the perspective that flexible marketing approaches must be considered not only from an economic standpoint but also in terms of social responsibility is gaining increasing importance.

Marketing adaptability is not merely a strategic concept, but also a process that dictates how businesses should adapt to changing market conditions [32], [33]. Dynamic market conditions compel companies to seek strategic flexibility in order to achieve sustainable competitive advantages. In this context, marketing adaptability emerges as a critical capability that enables businesses to respond rapidly to shifting market demands and changes in consumer behavior. The general focus within the literature on marketing adaptability tends to emphasize the concept’s importance.

Previous research indicates that marketing adaptability plays a central role in preparing for market uncertainties and capitalizing on opportunities [21]. Furthermore, several studies have focused on the effect of marketing adaptability on enhancing customer satisfaction and strengthening brand loyalty [22], [23]. Other research indicates that the literature lacks in-depth examination of marketing adaptability and that the influence of organizational structure, alongside financial and resource management, requires further investigation [24]. Similarly, existing studies highlight that research examining the effects of digital transformation on marketing adaptability remains relatively limited [25].

Existing studies in the literature have predominantly been confined to specific sectors and geographical regions, which has complicated a comprehensive understanding of marketing adaptability’s broader effects [26]. Previous research indicates that further investigation is needed into the influence of sectoral differences on marketing adaptability [27]. Specifically, clearly delineating the differences in how B2B and B2C marketing strategies impact flexibility could make companies’ strategic decision-making processes more effective [28]. Although numerous studies in the literature demonstrate the positive effects of marketing adaptability on business performance, there is insufficient research on the sustainability of these effects [29], [30]. Furthermore, the scarcity of studies examining the interactions between marketing adaptability and other business functions presents a significant area for future research [31], [34].

In conclusion, although existing research on marketing adaptability has yielded significant findings, adopting a more comprehensive and multi-faceted approach in this field is of paramount importance from both theoretical and practical perspectives. The relationship between marketing adaptability and sustainable marketing orientation is of critical importance for the strategic success of businesses in today’s volatile market conditions. The literature contains numerous studies demonstrating how marketing adaptability shapes sustainable marketing strategies by accelerating the adoption of environmental, economic, and social responsibilities within organizations. In this context, the following hypothesis is proposed, and the conceptual model of the research is presented in Figure 1.

H1: Marketing adaptability has a positive effect on sustainable marketing orientation.

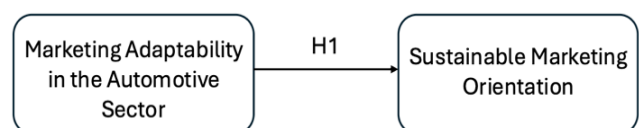


Figure 1. Conceptual model of the research

3. Research Methodology

This study was conducted using a quantitative research design. The population of the research consists of employees working in the automotive sector in the province of Konya, Türkiye. This section outlines the research methodology, sample selection criteria, data collection instruments, and data analysis procedures.

3.1. Population and Sample of the Research

The number of manufacturers operating in the automotive sector in the province of Konya, Türkiye, is 318 [35], and the estimated number of employees is approximately 3,000 individuals. Previous research recommends obtaining a minimum of 384 valid responses when the population cannot be precisely determined, suggesting that a sample of this size is sufficient to represent the population [36]. For cases where the population is not fully known, the sample size is calculated using the formula $n = (t^2 \times p \times q) \div d^2$ [36] (1).

The values were substituted into the formula to determine the sample size, and the minimum required sample size was calculated as 384 individuals [$n = (1.96^2 \times 0.50 \times 0.50) \div (0.05)^2$] (2).

Prior to the data collection phase, ethical approval was obtained from the Selçuk University Social Sciences and Humanities Scientific Research and Publication Ethics Committee, with a decision dated 16.07.2024 and numbered 11/81. The data were collected between January and March 2025 through a survey service. From the 507 questionnaires obtained from voluntary participants, incomplete and invalid forms were discarded, and data analyses were conducted with 392 valid responses.

3.2. Data Collection Instruments

A survey method was employed as the data collection technique in this research. The data collection instrument consisted of three sections. The first section contained five questions related to demographic characteristics. The second section included the Sustainable Marketing Orientation Scale consisting of 15 items, and the third and final section featured the Marketing Adaptability Scale for the Automotive Sector consisting of 24 items.

The Marketing Adaptability Scale for the automotive sector was developed in previous research [37] and comprises six factors.

These factors are price, customer focus, product, distribution, promotion, and structural hierarchy. The Turkish validity and reliability of the scale were established in subsequent research [38].

The Sustainable Marketing Orientation Scale was developed in previous research [39]. The scale consists of three factors, namely strategic integration, societal engagement, and ethical capabilities. The Turkish validity and reliability of the scale were established in subsequent research [40]. Both scales were used in a five-point Likert-type format.

3.3. Data Analysis

The statistical analyses of the data used in the study were conducted using IBM SPSS and IBM SPSS AMOS software. Initially, descriptive statistics were applied. Subsequently, reliability analysis, correlation analysis, and simple regression analysis were performed for hypothesis testing, in that order.

4. Findings

The findings obtained from the descriptive statistics are presented in Table 1.

Table 1. Demographic findings (n=392)

Variable	%	Frequency
Marital Status		
Single	54.6	214
Married	45.4	178
Gender		
Female	37.0	145
Male	63.0	247
Education Level		
High School	35.2	138
Associate's Degree	17.9	70
Bachelor's Degree	38.5	151
Postgraduate	8.4	33
Department		
Education	3.1	12
IT	3.8	15
HR	1.5	6
Accounting	9.7	38
Parts Manufacturing	18.1	71
Purchasing	1.8	7
Sales & Marketing	33.7	132
After-Sales Support	8.7	34
Repair & Maintenance	12.5	49
Management	6.1	24

Based on the findings presented in Table 1, it was determined that the majority of participants were single (54.6%), male (63%), held a Bachelor's degree (38.5%), and were employed in the sales and marketing department (33.7%). Furthermore, the participants' ages ranged from 18 to 61, with a mean age of 31.26 years.

The results of the Pearson correlation analysis, conducted to identify the relationships between the variables, along with the Cronbach's Alpha coefficients used to assess reliability, are presented in Table 2.

Table 2. Correlation and reliability analysis findings

Scales	Mean	SD	1	2
1. Marketing Adaptability in the Automotive Sector	3.67	1.003	(.98)*	
2. Sustainable Marketing Orientation	3.74	0.955	.75	(.97)*

* Cronbach's Alpha coefficient

*** Correlation is significant at the 0.01 level*

Mean: Arithmetic Mean, SD: Standard Deviation

As can be seen in Table 2, the Cronbach's Alpha coefficients for both scales were found to be high, indicating that the collected data are reliable. Furthermore, it was determined that at the 0.01 significance level, the variables exhibited a statistically significant, strong, and positive relationship with each other.

Following this stage, the results of the regression analysis conducted to test the research hypothesis are presented. The findings are shown in Table 3.

Table 3. Regression analysis findings

Dependent Variable	Independent Variable	t	B	F	R ²
Sustainable Marketing Orientation	Constant	5.315	0.787	498.529	0.749
	Marketing Adaptability in the Automotive Sector	22.328			

$p < .001$

As illustrated in Table 3, marketing adaptability in the automotive sector was found to have a statistically significant, strong, and positive effect on sustainable marketing orientation ($R^2 = .749$, $p < .001$). Therefore, hypothesis H1 is accepted. In other words, as employees' perceptions of marketing adaptability increase, their perceptions of sustainable marketing orientation also increase correspondingly.

For a detailed examination of the data obtained from the research, difference tests were included in the final section. Prior to conducting these tests, skewness and kurtosis analyses were utilized to determine whether the data followed a normal distribution.

The obtained values ranged from 1.343 to 0.558, indicating that the data were considered to be normally distributed.

Consequently, parametric tests were applied: An Independent Samples t-test was used to determine the significance of differences between the means of two groups, and a one-way ANOVA test was used to compare the means of more than two groups. The age variable was excluded from the analysis as it was not categorized into groups, and the department variable was also excluded because some of its categories contained low frequencies. The findings are presented in Table 4.

Table 4. Findings from the independent-samples T-test

Scales / Variables	Marketing Adaptability in the Automotive Sector Scale	Sustainable Marketing Orientation Scale
Gender	Mean±SD	Mean±SD
Female (n=145)	3,68± ,90	3,77± ,89
Male (n=247)	3,65± 1,06	3,73± ,99
t / p-value	,261 / ,039	,426 / ,108
Marital Status		
Single (n=214)	3,58± 1,05	3,62± 1,01
Married (n=178)	3,77± ,93	3,88± ,87
t / p-value	-1,823 / ,030	-2,668 / ,003

As can be seen in Table 4, no statistically significant difference was found in the participants' sustainable marketing orientation scale data based on the gender variable ($p > 0.05$). However, a statistically significant difference was identified in the marketing adaptability in the automotive sector scale ($p < 0.05$).

Accordingly, the perception of marketing adaptability among women ($\bar{x}=3.68 \pm 0.90$) is higher than that of men ($\bar{x}=3.65 \pm 1.06$). The findings of the one-way ANOVA test, applied for comparing more than two group means, are presented in Table 5.

Table 5. Findings of the One-way ANOVA test

Scales / Variables	Marketing Adaptability in the Automotive Sector Scale	Sustainable Marketing Orientation Scale
Education Level		
High School (138)	3,63± 1,04	3,66± ,94
Associate's Degree (70)	3,62± ,91	3,75± ,87
Bachelor's Degree (151)	3,69± 1,01	3,78± ,99
Postgraduate (33)	3,81± 1,05	3,89± ,97
F / p	,353 / ,787	,749 / ,524

As can be seen in Table 5, no statistically significant difference was observed for either the Marketing Adaptability in the Automotive Sector scale or the Sustainable Marketing Orientation scale based on the education level variable.

5. Results

This study empirically examined the relationship between marketing adaptability and sustainable marketing orientation in the automotive sector in Konya, Türkiye. The analysis began with an assessment of the measurement scales. As presented in Table 2, both the Marketing Adaptability and Sustainable Marketing Orientation scales demonstrated excellent internal consistency, with Cronbach's Alpha coefficients of 0.98 and 0.97, respectively. Furthermore, Pearson correlation analysis indicated a strong, positive, and statistically significant relationship between the two variables ($r = 0.75$, $p < 0.01$), providing preliminary support for the main hypothesis.

To test the hypothesis formally, a simple linear regression analysis was conducted. The results, summarized in Table 3, indicate that the model is statistically significant ($F = 498.529$, $p < .001$). Marketing adaptability explains 74.9% ($R^2 = .749$) of the variance in sustainable marketing orientation.

The analysis confirms that marketing adaptability has a strong, positive, and statistically significant effect on sustainable marketing orientation ($\beta = .75$, $p < .001$). Therefore, hypothesis H1 is supported.

Additional analyses were performed to explore the influence of demographic variables. An independent-samples t-test revealed a significant difference in marketing adaptability based on gender ($p = .039$), with female employees ($\bar{x} = 3.68$) reporting slightly higher scores than male employees ($\bar{x} = 3.65$). Marital status also yielded significant results; married employees scored higher than their single counterparts in both marketing adaptability ($p = .030$) and sustainable marketing orientation ($p = .003$). However, one-way ANOVA test showed that education level did not produce any statistically significant differences in the scores for either construct ($p > .05$).

6. Discussion

The primary finding of this research offers substantial empirical support for the theoretical linkage between a company's dynamic capabilities and its strategic orientation towards sustainability. The strong, positive effect of marketing adaptability on sustainable marketing orientation ($R^2 = 0.749$) suggests that the ability to rapidly reconfigure marketing strategies is not merely a tactical advantage but a fundamental enabler for integrating sustainability into the core of marketing activities.

This implies that in the volatile automotive industry, organizational agility to respond to market shifts, technological disruptions, and evolving consumer preferences is intrinsically connected to the capacity to adopt environmentally and socially responsible business practices.

The demographic findings provide nuanced insights for human resource management and organizational strategies. The higher perception of marketing adaptability among female employees, though a relatively slight difference, invites further exploration into whether diverse perspectives enhance strategic flexibility. More pronounced is the influence of marital status, with married employees demonstrating significantly stronger orientations towards both adaptability and sustainability. This may be attributed to factors such as greater life stability, longer-term planning horizons, or heightened social responsibility, which could translate into a more committed and forward-thinking approach at work. Conversely, the non-significant role of education level indicates that professional experience, organizational culture, and on-the-job training may be more decisive than formal education in shaping these strategic perceptions within the context of the automotive sector.

From a managerial perspective, these results carry significant implications. They posit that investments aimed at enhancing marketing flexibility such as flattening hierarchical structures for quicker decision-making, fostering a culture of innovation, and leveraging digital tools for real-time market sensing are not isolated initiatives. Instead, they are strategic investments that simultaneously advance a company's sustainability agenda. Managers should therefore view sustainability not as a separate, compliance-driven function but as an outcome of a deeply ingrained, adaptable, and responsive marketing system.

7. Conclusion

This study concludes that marketing adaptability serves as a critical antecedent and powerful driver of sustainable marketing orientation in the automotive industry. The empirical evidence confirms that the strategic flexibility required to navigate a complex and changing business landscape is a vital prerequisite for embedding sustainability into marketing practices. The research moves beyond theoretical propositions by providing a quantitative validation of this relationship, thereby contributing to the literature on dynamic capabilities and sustainable marketing.

Theoretically, this study bridges a gap in the literature by quantitatively establishing the link between marketing adaptability and sustainable marketing orientation, particularly in the context of an emerging market.

Practically, it provides a clear mandate for automotive companies: To achieve sustainability goals, they must first build agile and flexible marketing structures. This involves empowering employees, streamlining organizational processes, and continuously scanning the environment to anticipate change.

Despite its contributions, this study is not without limitations. Its cross-sectional design captures data at a single point in time, thereby limiting causal inferences. The geographical focus on Konya, Türkiye, while valuable, also affects the generalizability of the findings. Future research could employ longitudinal designs to trace the evolution of this relationship over time and replicate the study across different cultural and industrial contexts to enhance external validity. Investigating the mediating variables (e.g., organizational learning, innovation performance) and moderating variables (e.g., leadership style, company size) of the adaptability-sustainability relationship would also be a fruitful avenue for further inquiry.

In summary, for automotive companies aiming to thrive in an era defined by disruption and responsibility, cultivating marketing adaptability is not an option but a strategic imperative that paves the way toward a sustainable and competitive future.

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References:

- [1]. Billy, R. G., & Müller, D. B. (2023). Aluminium use in passenger cars poses systemic challenges for recycling and GHG emissions. *Resources, Conservation and Recycling*, 190, 106827.
- [2]. Hruševská, D., Lopes, R. B., & Juříčková, E. (2019). Challenges in the introduction of AGVS in production lines: Case studies in the automotive industry. *Open Engineering*, 14(1), 233–247.
- [3]. Blankenship, C. P., & Schulz, R. B. (1977). *Opportunities for ceramics in the ERDA/NASA continuous combustion propulsion systems program* (NASA-TM-X-73597; E-9071). NASA Technical Reports Server.
- [4]. Pamukçu, M. T., & Sönmez, A. (2011). *Technology transfer in the global automotive value chain: Lessons from the Turkish automotive industry* (STPS Working Papers No. 1109). Science and Technology Policy Studies Center, Middle East Technical University.
- [5]. Semenenko, T. M. (2018). The strategies for internationalization of the automotive TNCs in the context of global financial-economic instability. *Business Inform*, (7), 20–25.
- [6]. Hawkins, R. (2009). Is Canada really all that bad at innovation? A tale of two industries. *International Productivity Monitor*, 18, 72–79.
- [7]. Laseinde, O. T., & Kanakana, G. M. (2017). Interventions to skills development in the automotive manufacturing sector of South Africa. *Skills Development for Sustainable Manufacturing*. IntechOpen.

- [8]. Blanco, A. M., & Canela, J. M. (2017). Digital manufacturing: What are we able to print? *Journal of Mechanics Engineering and Automation*, 7, 365–374.
- [9]. Lenfle, S. (2007). Projects and innovation: The ambiguity of the literature and its implications. In *IRNOP 8th international conference*.
- [10]. Sabuncu, T. B. (2012). *Opportunities and risks for CO₂ intense sectors in Turkey*. Sabancı University Corporate Governance Forum.
- [11]. Abramson, L. (2015). *Clean economy rising: Manufacturing powers clean energy in Ohio*. The Pew Charitable Trusts.
- [12]. Muldiansyah, M., Mulyadi, A., & Mulyadi, D. (2024). Analysis of the Sales Budget for Honda and Yamaha Motorcycles in Indonesia in 2023. *Jurnal Audit, Pajak, Akuntansi Publik (AJIB)*, 3(2), 90-96.
- [13]. Sunmola, F., et al. (2024). Lean green practices in automotive components manufacturing. *Procedia Computer Science*, 232, 2001-2008.
- [14]. Hair, J. F., et al. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24.
- [15]. Rogers, B., & Rodrigo, P. (2015). An exploratory study of factors influencing make-or-buy of sales activities: The perceptions of senior sales managers. *Strategic Outsourcing: An International Journal*, 8(2/3), 229-261.
- [16]. Asif, M., de Bruijn, E. J., & Fisscher, O. A. (2008). Corporate motivation for integrated management system implementation, why do firms engage in integration of management systems: A literature review & research agenda. *16th Annual High Technology Small Firms Conference, HTSF 2008*.
- [17]. Lazebnyk, V. (2025). Crisis as a factor of changing the marketing strategy of social responsibility for organic product manufacturing enterprises. *Business Navigator*.
- [18]. Savchenko, S., Sukach, O., Alimov, D., & Abliazova, N. (2024). Marketing approach to the development of personnel management system. *Acta Academiae Bergensiensis. Economics*, 5, 163–178.
- [19]. Micevski, M. (2015). *Marketing and sales interface flexibility: a social exchange theory perspective*. [Doctoral dissertation, Loughborough University].
- [20]. Oates, C., et al. (2008). Marketing sustainability: Use of information sources and degrees of voluntary simplicity. *Journal of Marketing Communications*, 14(5), 351-365.
- [21]. Zahoor, N., & Lew, Y. K. (2023). Enhancing international marketing capability and export performance of emerging market SMEs in crises: strategic flexibility and digital technologies. *International Marketing Review*, 40(5), 1158-1187.
- [22]. Aslam, F., Hunjra, A. I., Bouri, E., Mughal, K. S., & Khan, M. (2023). Dependence structure across equity sectors: Evidence from vine copulas. *Borsa Istanbul Review*, 23(1), 184-202.
- [23]. Thoumrungroje, A., & Racela, O. C. (2022). Linking SME international marketing agility to new technology adoption. *International Small Business Journal*, 40(7), 801-822.
- [24]. Yang, D., et al. (2020). Market orientation, strategic flexibility and business model innovation. *Journal of Business & Industrial Marketing*, 35(4), 771-784.
- [25]. Kumar, P., et al. (2020). Cause-related marketing and service innovation in emerging country healthcare: Role of service flexibility and service climate. *International Marketing Review*, 37(5), 803-827.
- [26]. Alkhamis, F. A. (2024). The operational impact of e-business on SMEs performance in Saudi Arabia. *Uncertain Supply Chain Management*, 12(3), 1391-1398.
- [27]. Jiang, Z. (2024). Leveraging Digital Customer Orientation for Business Model Innovation and Enterprise Transformation: A Cosmetics Sector Perspective. *International Journal of Science and Business*, 38(1), 120-137.
- [28]. Oyeyemi, O. P., et al. (2023). Impact of customer-centric marketing on FMCG supply chain efficiency and SME profitability. *Global Journal of Advanced Research and Reviews*, 1(2), 71–81.
- [29]. Chatterjee, S., et al. (2022). Dark side of sharing economy: examining the unethical practices and its impact on coopetition and firm performance. *Journal of Business-to-Business Marketing*, 29(1), 69-85.
- [30]. Agha, S., Atwa, E., & Kiwan, S. (2021). Investigating the impact of strategic intelligence on firm performance and the mediator role of strategic flexibility. *Modern Perspectives in Economics, Business and Management*, 3, 13–25.
- [31]. Hussain, H. N., et al. (2023). Implementing technology for competitive advantage in digital marketing. *International Journal of Scientific and Management Research*, 6(6), 95-114.
- [32]. Verhoef, P. C., et al. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of business research*, 122, 889-901.
- [33]. Torres, P., & Augusto, M. (2020). Understanding complementarities among different forms of innovation. *European Journal of Innovation Management*, 23(5), 813-834.
- [34]. Herhausen, D., et al. (2021). Re-examining strategic flexibility: a meta-analysis of its antecedents, consequences and contingencies. *British Journal of Management*, 32(2), 435-455.
- [35]. Acar, Ö. E., & Çağlıyan, V. (2021). Sürdürülebilir tedarik zinciri uygulamaları ve dış kaynak kullanımının işletme performansına etkisi: otomotiv sektöründe bir araştırma. *Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Dergisi*, 18(1), 408-433.
- [36]. Cochran, W. G. (1977). *Sampling techniques*. John Wiley and Sons.
- [37]. Shalender, K., Singh, N., & Sushil. (2017). AUTOFLEX: marketing flexibility measurement scale for automobile companies. *Journal of Strategic Marketing*, 25(1), 65-74.
- [38]. Yüksekbilgili, Z. (2019). AUTOFLEX: Otomotiv sektöründe pazarlama esnekliği ölçeğinin Türkçeye uyarlanması: Güvenirlilik ve geçerlilik çalışması. *MANAS Sosyal Araştırmalar Dergisi*, 8(3), 2819-2833.
- [39]. Lučić, A. (2020). Measuring sustainable marketing orientation: Scale development process. *Sustainability*, 12(5), 1–22.
- [40]. Kara, M., Karaman, M., & Çelikkaya, K. (2023). Sürdürülebilir pazarlama yönelimi ölçeğinin konaklama işletmeleri üzerinde uyarlanması: Yozgat ili örneği. *Uluslararası İktisadi ve İdari Bilimler Dergisi*, 9(2), 84–110.