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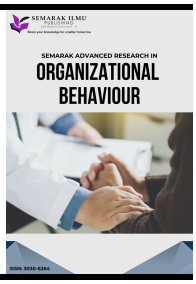

Effect of Adaptability to Technological Disruption in the Relationship between Agile Organizational Environments and Technological Revolution on Organizational Performance

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ABSTRACT

The rapid technological advancements have necessitated the adaptation of various generational cohorts to agile organizational environments. The study investigates the adaptability of Millennials and Generation Z to technology disruptions in Malaysian agile organizations and their impact on organizational performance. The study emphasizes the significance of generational adaptability in enhancing organizational performance amidst technological disruptions in strategic human resource practices. The study utilized a quantitative research methodology to gather data from 100 employees across various industries using structured questionnaires and stratified random sampling to ensure adequate representation. The PLS-SEM study revealed that Millennials and Generation Z exhibit exceptional adaptability in agile situations, which significantly enhances organizational performance. The study emphasizes the role of adaptability in influencing agile organizational practices and outcomes, emphasizing the importance of generational characteristics in navigating technological changes. Organizations can improve their performance by creating environments that encourage rapid learning and adaptability, especially tailored to the unique characteristics of younger generations. The study indicates that Malaysia's National Policy on Science, Technology, and Innovation (NPSTI) 2021-2030 aims to expedite the country's advancements in these areas over the next decade.

1. Introduction

The Malaysian Digital Economy Corporation (MDEC) is actively promoting digital transformation and agile practices among Malaysian companies to boost innovation and competitiveness. The changes in industries such as information technology and manufacturing in Malaysia are causing significant impacts. Firms are adopting agile methodologies to remain competitive in a rapidly changing technology and market landscape. Malaysia's workforce is significantly influenced by

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Millennial and Gen Z, making the integration of these generations into agile environments crucial. The modern workplace is a diverse blend of technological advancements and demographic shifts, reflecting the diverse backgrounds and experiences of different generations. The diversity of professionals, Millennial, and Generation Z, each with unique values, expectations, and working styles, presents both challenges and opportunities for organizational dynamics. Millennials and Generation Z are adept at navigating technological disruptions within organizations due to their familiarity and fluency with technology. Employees' work and decision-making processes are influenced by their preferences for growth opportunities, learning, and technology usage. Both generations' adaptability to technology disruption is crucial for navigating challenges and performing well in agile organizational settings, where flexibility and responsiveness are paramount. The rapid advancement of technology in Malaysia and the shift towards agile methodologies present both challenges and opportunities for organizations. Al Qadi [6] and Awais [9] emphasize the importance of strategic flexibility and innovation in enhancing organizational performance, highlighting the significant impact of digital technologies on agility and customer focus. Understanding younger generations' adaptability to agile organizational structures in Malaysia, especially amid technological disruptions, remains a significant gap [51].

The lack of clarity on the adaptability of Millennials and Gen Z in agile organizational environments amidst the technological revolution is a significant issue [23]. Understanding younger generations' adaptability to technological disruptions is crucial for understanding their role in an agile environment, despite their digital proficiency. Uncertainty hinders organizations from effectively utilizing Millennials and Gen Z's digital skills to drive performance amidst technological disruptions [7]. The uncertainty surrounding the adaptability of Millennials and Gen Z in agile organizations can potentially hinder Malaysian organizations' performance. Organizations must understand how to effectively utilize the digital proficiency of younger generations to stay competitive in the rapidly evolving technological landscape. The ineffective integration of Millennials and Gen Z into agile frameworks can lead to missed opportunities for innovation and responsiveness, ultimately hindering organizational success. The study highlights a gap in understanding how Millennials and Gen Z adapt to agile organizational structures, highlighting potential skill gaps in leadership, critical thinking, and interpersonal communication. The lack of understanding and potential skill deficiencies among younger employees could negatively impact organizational performance and job satisfaction, potentially undermining the benefits of agile frameworks [12]. This study explores challenges and opportunities faced by Millennials and Gen Z in Malaysian organizations, aiming to enhance performance amidst technological disruptions.

Lee [32] highlights the strategic advantage of the tech-savviness of Gen Z and Millennials, who make up over half of Malaysia's working population. Alaql *et al*., [5] highlights the potential of the rapid adoption of new technologies in agile organizations to drive innovation and competitiveness. The current era demands adaptability, not just a trait, as it is a necessity for success in the fast-paced technological changes. The Malaysian Ministry of International Trade and Industry has identified a potential bottleneck in the adoption of technological changes by SMEs. Mokhtar *et al*., [35] suggest that reluctance or delay in adopting new technologies can negatively impact organizational performance and global market competitiveness. Technological advancements like AI, automation, and digitalization are transforming the country, presenting both challenges and opportunities for organizations to innovate and drive economic growth. Hence, Malaysian industries are preparing to navigate digital challenges and become key players in the evolving economic landscape by aligning with global trends like Industry 4.0 and sustainable practices.

The manufacturing industry, crucial for a country's growth, is facing numerous challenges due to the advancements in Industry 4.0 technology. The potential disruptive technologies are significantly

altering the way work is conducted. Prior research explores the role of organization innovation and its enablers like knowledge-oriented leadership and decentralized organization structure in addressing challenges for companies in preparing for Industry 4.0. The gap in understanding how these generations can contribute and thrive in a rapidly technologically disrupted environment is wide-ranging. This study explores the intersection of younger generations' digital nativity and organizational agility in Malaysian business environments, aiming to identify strategies to enhance their integration and effectiveness in agile organizations. However, the study on Millennial and Generation Z adaptability in agile organization contexts in Malaysia is lacking.

1.1. Literature Review

This study aims to enhance understanding of how organizations can utilize agile techniques, technology advancements, and flexibility to enhance performance [14]. In Malaysia, the Millennial and Generation Z cohorts dominate the population, with the millennial generation comprising 70% of the population [32]. Technology offers benefits but also presents risks like privacy and cybersecurity issues. Organizations need to understand how to leverage digital fluency and adaptability of younger generations for enhanced performance. This study aims to fill knowledge gaps by providing empirical evidence on the relationship between agile organization environments, technology revolutions, adaptability to disruption, and organizational performance in improving our comprehension of how organizations can navigate digital complexities and leverage technological advancements for sustainable success. The study by Ghasemi [24] indicates a positive correlation between organizational agility and various aspects of organizational effectiveness. Rapid technological innovation, particularly in tech startups and software development companies, can significantly improve an organization's performance through agility. Agile environments foster rapid technological changes, promoting experimentation, adaptability, and user feedback integration, enabling organizations to meet market demands and stay competitive. Akkaya *et al*., [4] study examined the moderating role of organizational agility in the relationship between dynamic capabilities and market performance in SMEs in Turkey and Malaysia.

Table 1
Empirical gaps

Constructs	Author /Year	Past Research Gaps	Method	Finding	Contribution
Agile Organization Environment	[8]	The study highlights the inadequacy of traditional corporate training methods in continuously preparing employees to adapt and respond to rapid changes.	Qualitative	Agile learning strategies are crucial for organizations in dynamic environments, as they develop employees' agile skills, enhancing core competencies essential for competitiveness.	The study emphasizes the importance of implementing agile learning strategies to create an environment that encourages continuous employee development.
	[41]	The pandemic has significantly impacted the performance of Malaysian SMEs in the manufacturing	Quantitative	The study revealed that strategic agility significantly impacts the	This paper enhances the understanding of strategic agility's role in improving

		sector, particularly in terms of strategic agility.		organizational performance of SMEs in the Malaysian manufacturing sector.	organizational performance in uncertain business environments.
	[47]	Agile transformations initially favored individual teams focusing on software development, but their impact on organizational performance varies at various levels.	Quantitative	The study reveals that agile transformations significantly enhance organizational performance in various aspects such as productivity, responsiveness, quality, workflow health, and employee satisfaction and engagement.	The study provides a comprehensive understanding of the advantages of agile transformations, identifying the dimensions impacted and tracing specific benefits to different organizational layers.
Technology Revolution	[20]	The study examines the effects of new technological revolutions on both global and domestic energy industries, especially in light of the rapidly evolving technological landscape.	System analysis methods, physical, technical, and feasibility analyses.	The study indicates that the upcoming technological revolution will significantly impact the energy sector by increasing electricity demand and imposing stricter quality and reliability requirements.	The study analyzes the impact of the new technological revolution on the energy sector, highlighting the growing demand for electricity and the need for a reliable, high-quality supply.
	[42]	The Fourth Industrial Revolution presents a significant chance for developing nations to expand into new sectors and industries by implementing advanced technologies.	Comparative analysis, and synthesis method	The study reveals that the Fourth Industrial Revolution, focusing on digitalization and intelligent systems, presents both opportunities and challenges for developing nations.	The paper explores the potential benefits of the Fourth Industrial Revolution for developing nations, highlighting its potential to enhance economic productivity, living standards, and global integration.

Adaptability to Technology Disruption	[43]	The study investigates the correlation between individuals' actions to acquire new technologies and the prevalence of inequality.	Qualitative	The study revealed that digital adaptability, characterized by five habits for learning new technologies, is linked to students' educational plans and STEM career aspirations.	The study explores the concept of adaptability in learning technologies and its impact on educational and career outcomes, especially in STEM fields.
	[17]	This is a comprehensive process where incumbent organizations adapt their business models in response to technological disruptions.	Qualitative	The study reveals that incumbent firms can adapt to disruptions through a two-phase process: standalone experimentation with new technologies, and alliances and acquisitions in response to disruptive business models.	The research provides a comprehensive analysis of how incumbent firms adapt to technological disruptions and the emergence of disruptive business models.
Organizational Performance	[39]	The study explores the potential of electronic Human Resource Management (e-HRM) systems to enhance employee and organizational performance in developing nations.	Quantitative	The study indicates that despite the early adoption of e-HRM systems in African contexts, their implementation positively impacts both employee and organizational performance.	This study contributes to the e-HRM literature by examining its impact in developing countries and highlighting the mediating role of employee performance.
	[16]	The study explores the influence of leadership on fostering a cooperative working environment and enhancing team performance, emphasizing the importance of individual performance in influencing overall organizational outcomes.	Quantitative	The study highlights the significance of organizational performance in achieving goals, creating value, and the impact of managerial skills on a company's success.	This study explores young individuals' perceptions of organizational performance and the key factors they consider crucial for their professional development and workplace success.

1.2 Analytical Framework

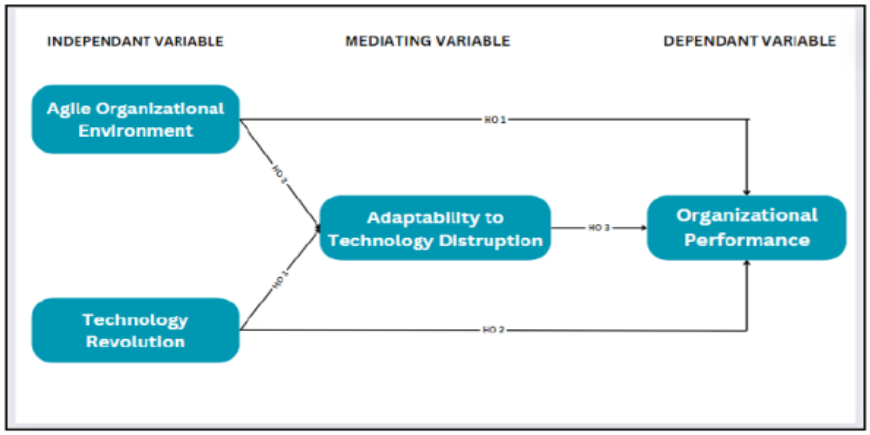

Fig. 1. Conceptual framework of the agile organizational environment and technology revolution on organizational

The conceptual framework (Fig. 1) outlines the impact of organizational agility and technological revolution on performance, consisting of two independent variables, one dependent variable, and one mediating variable. These elements are chosen for their potential to significantly influence an organization's performance, particularly in terms of responsiveness, innovation, and adaptability to rapid changes and technological advancements. The inclusion emphasizes the importance of an organization's swift response to changes and uncertainties in a fast-paced environment for its overall performance. Organizational agility and technology revolution are significantly influenced by adaptability to technology disruption, as highlighted by Mrugalska *et al.*, [36]. Recent literature emphasizes organizational agility's significance, but it lacks comprehensive analysis on how these environments impact different generational cohorts' adaptability to technological disruptions. This research aims to evaluate the impact of agile practices and technological advancements on the adaptability of the younger workforce. Agile Organization Theory is a framework that emphasizes designing and managing organizations to be adaptable, flexible, and responsive to environmental changes [18]. Agile and technology concepts are abstract as they encompass a wide range of actions and impacts across various organizational domains and levels. Agility encompasses a mindset and organizational culture that values change, innovation, and rapid response to external stimuli, not just physical actions [19]. In Malaysia, organizations are urged to adopt agile practices due to the need to adapt to rapidly changing technological landscapes and competitive pressures [25]. Strategic agility, characterized by strategic sensitivity, leadership unity, and resource fluidity, significantly enhances firm performance [15,41]. To emphasize the importance of agility in dynamic and competitive environments, highlighting how agile organizations excel in adapting to technological changes.

Therefore, the Resource-Based View theory suggests that organizations can achieve sustainable competitive advantages and superior performance by utilizing valuable, rare, inimitable, and non-substitutable resources. The Resource-Based View (RBV) theory is widely used in Malaysia to analyze and evaluate various aspects such as technological resources, human resource capabilities, and organizational culture. Lee *et al.*, [33] discuss how Malaysian technology firms utilize their proprietary software and IT infrastructure to gain a competitive edge in the tech industry. Furthermore, [45] explore the influence of organizational culture on competitive advantage, suggesting Malaysian companies can foster a culture that promotes success and sustainability. Organizations must adapt their resources to technological disruptions to maintain performance, enhance stability, and grow potential despite external pressures [13].

The Malaysian innovation diffusion theory is utilized across sectors like agriculture, technology, and business to comprehend the diffusion and adoption of innovations [46]. The theory explores the process of communication and adoption of new ideas or technologies within a social group over time [10]. Wang *et al*., [49], Innovation Diffusion Theory (IDT) suggests that an agile organizational environment, characterized by flexibility and change readiness, effectively adopts and diffuses innovations, enhancing competitive edge and performance. Innovation diffusion theory (IDT) plays a crucial role in analyzing the adoption and diffusion of technological advancements, especially in rapidly changing settings [34]. The relationship between IDT and adaptability to technology disruption is crucial in Malaysia, where organizations are grappling with rapid technological advancements and disruptions. High adaptability in organizations leads to efficient technology disruptions, successful innovation adoption, and improved performance outcomes [22].

2. Methodology

The study investigates the impact of Millennial and Generation Z in Malaysia on organizational performance in agile organizations due to their adaptability to technological disruptions. The research design examines the impact of agile organizational environments and technological revolutions on organizational performance, focusing on the mediating role of adaptability to technology. The quantitative method, rooted in the positivist paradigm, is a scientific approach crucial for objectively measuring the world through numerical data. This method is ideal for studies involving a large population and quantitative analysis to evaluate adaptability's impact without individual emotional or contextual bias. The sampling design is a critical element in quantitative research that ensures the validity and reliability of the study's findings. The explanatory research as a method used to explain causal relationships in a phenomenon to better understand its behavioral patterns. This study utilizes explanatory research to investigate the impact of technological adaptability on organizational performance in agile settings, thereby testing hypotheses related to these metrics. The deductive approach in research involves formulating theories based on existing knowledge and testing these theories through empirical observation. The deductive approach is crucial in quantitative research, where hypotheses are formulated based on established theories and tested through data analysis. In this study, the deductive approach and quantitative strategies are used to analyze the influence of adaptability to technological disruption on the relationship between agile organizational environments and technological revolution. SPSS and SMARTPLS 4 can effectively address the complex relationship between all variables in data analysis. The study focuses on Millennials and Generation Z employees in various agile organizations in Malaysia. The stratified sampling method ensures that various sectors like technology, finance, and manufacturing are adequately represented. This method ensures the study's theoretical grounding and empirical validation, enhancing the robustness and credibility of the research findings. Stratified sampling ensures accurate representation of population subgroups, reflecting diversity in industries adapting to agile environments and technology revolutions. This method provides valuable insights and contributes to existing knowledge in various fields, particularly in understanding organizational performance amidst technological disruptions and revolutions. The sampling process involves selecting target populations, including Millennials and Generation Z, from agile industries, and determining the appropriate sample size to analyze the impact of adaptability to technology disruption. A survey of 100 questionnaires was distributed to participants from various agile organizations in Malaysia, covering various industries and regional locations. To achieve a power of 80% for detecting an R^2 value of at least 0.25 with a 5% margin of error, considering the maximum number of seven arrows pointing to a construct in the PLS path model, the recommended minimum

sample size is 80. The collection of quantitative data can be achieved through electronic questionnaire design and online surveys such as Google form, QR code, or Survey Monkey. The study employs a survey using the Likert scale to gauge respondents' opinions on the questions. The document consists of five sections. Section A of the survey provides all pertinent details about the respondent's gender, age, job title, and year of experience. Sections B, C and D address the relationship between independent variables, mediating variable and dependent variable.

2.1 Data Analysis and Interpretation

Table 1 displays the demographic distribution of 80 randomly selected respondents from various Malaysian regions and industries. The study included 31 males (38.75%) and 49 females (61.25%), with the majority of responses coming from the age groups of 23-27 years (21.25%) and 37-43 years (38.75%). The majority of individuals (33.75%) and bachelor's degree holders (31.25%) have a diploma. The workforce in the targeted regions and industries is relatively well-educated, with the manufacturing sector (22.50%) and finance sector (11.25%) having the highest representation. The majority of respondents (38.75%) and those with over 10 years of experience (31.25%) were experienced within 1-5 years.

Table 1
Profile respondents

Demographic	Category	Frequency	Percent (%)
Age	17-22 (Gen Z)	7	**8.75**
	23-27 (Gen Z)	17	**21.25**
	28-36 (Millennials)	25	**31.25**
	37-43 (Millennials)	31	**38.75**
	Other	-	**-**
Gender	Male	31	**38.75**
	Female	49	**61.25**
High Education Level	High School	7	**8.75**
	Diploma	27	**33.75**
	Bachelor’s Degree	25	**31.25**
	Master’s Degree	18	**22.50**
	Doctorate	2	**2.50**
	Other	1	**1.25**
Industry of Employment	Information Technology	7	**8.75**
	Manufacturing	18	**22.50**
	Healthcare	11	**13.75**
	Education	7	**8.75**
	Finance	9	**11.25**
	Retail	12	**15.00**
	Government Servant	7	**8.75**
	Other	9	**11.25**
Year of Experience	Less than 1 years	3	3.75
	1 - 5 years	31	38.75
	6 - 10 years	20	25.00
	More than 10 years	25	31.25
	Other	1	1.25

2.2 Reliability Test

Table 2 demonstrates that the outcome reacted positively with an increase in sample size to 80, indicating acceptable agreement with a coefficient over 0.70. The Cronbach Alpha for AOE decreased

from 0.912 at N=30 to 0.843 at N=80. The study reveals that the reliability of Cronbach Alpha is significantly influenced by the number of variance and standard deviation in the data.

Table 2
Construct reliability analysis

Const.	Measurement items	Outer Loading	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average variance extracted (AVE)
AOE	AOE 1	0.759				
	AOE 2	0.813				
	AOE 3	0.820	0.843	0.849	0.888	0.614
	AOE 4	0.767				
	AOE 5	0.757				
TR	TR 1	0.809				
	TR 2	0.856				
	TR 3	0.756	0.872	0.862	0.897	0.664
	TR 4	0.723				
	TR 5	0.836				
ATD	ATD 1	0.708				
	ATD 2	0.825				
	ATD 3	0.863	0.870	0.879	0.908	0.659
	ATD 4	0.832				
	ATD 5	0.838				
OP	OP 1	0.772				
	OP 2	0.858				
	OP 3	0.769	0.856	0.873	0.906	0.636
	OP 4	0.850				
	OP 5	0.806				

-*AOE=Agile Organizational Environmental; TR= Technology Revolution; ATD = Adaptability of Technology Disruption; OP = Organizational Performance

2.3 Construct Validity

Table 3 explains the convergence of the measurement model, with higher values indicating higher reliability, and AVE and CR values ranging from 0 to 1. The convergence validity of a research is confirmed when the AVE value is greater than or equal to 0.5, which is generally considered acceptable in research. Fornell *et al*., [21] suggest that convergent validity is sufficient if AVE is less than 0.5 but composite reliability is higher than 0.6. Table 3 shows that the Average Variance Extracted (AVE) for Agile Environmental Orientation (AOE) is 0.784. This value surpasses the correlation values of AOE with other constructs: 0.793 with adaptability to technological disruption (ATD), 0.775 with organizational performance (OP), and 0.796 with technological revolution (TR). The AOE shows discriminant validity as its square root of AVE is higher than its correlations with these constructs. The square root of the AVE for ATD is 0.815, surpassing its correlations with other constructs like AOE (0.793), OP (0.931), and TR (0.848), and confirming its perfect self-correlation. The correlation coefficient between OP and TR is 0.744, indicating a strong positive relationship.

Table 3
Discriminant validity – Fornell – Larcker Criterion

	AOE	ATD	OP	TR
AOE	0.784			
ATD	0.793	0.815		
OP	0.775	0.931	0.812	
TR	0.796	0.848	0.744	0.797

-*AOE=Agile Organizational Environmental; TR= Technology Revolution; ATD = Adaptability of Technology Disruption; OP = Organizational Performance

2.4 Structural Model Path Coefficients

Table 4 illustrates how the structural equation model confirms each of the hypotheses. The measurement model's evaluation is followed by assessing the structural path coefficients and their statistical significance, which represent the relationships between researches constructs. The study tested the hypothesis of a strong correlation between agile organization environment (AOE) and organizational performance (β = 0.179, t = 2.210, p value = 0.027). The study confirms the hypothesis that an agile organizational environment (AOE) positively impacts organizational performance. Table 4 presents a range of effects for the hypothesis tested in the study focusing on the impact of AOE, TR, and ATD on OP. The table reveals that for a 2-tailed test to be statistically significant with a p-value below 0.05, the T-statistic must be at least ±1.96. The study reveals a significant and robust relationship between adaptability to technological disruption and organizational performance with a T statistic of 11.557 and a P value of 0.000, indicating that ATD significantly predicts OP with a nearly complete mediation effect. The coefficients for AOE -> ATD -> OP is 0.321 and TR -> ATD -> OP is 0.587, respectively, with a slightly above-conventional alpha level, suggesting a borderline case of inconsistency across different samples or settings.

Table 4
Path coefficients

Hypothesis	Patch Coefficient (β)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AOE -> ATD	0.323	0.354	0.154	2.099	**0.036**
AOE -> OP	0.179	0.165	0.081	2.210	**0.027**
ATD -> OP	0.993	1.002	0.086	11.557	**0.000**
TR -> ATD	0.591	0.564	0.148	3.988	**0.000**
TR -> OP	-0.241	-0.234	0.096	2.518	**0.012**
AOE -> ATD -> OP	0.321	0.357	0.164	1.951	0.051
TR -> ATD -> OP	**0.587**	**0.563**	**0.150**	**3.901**	**0.000**

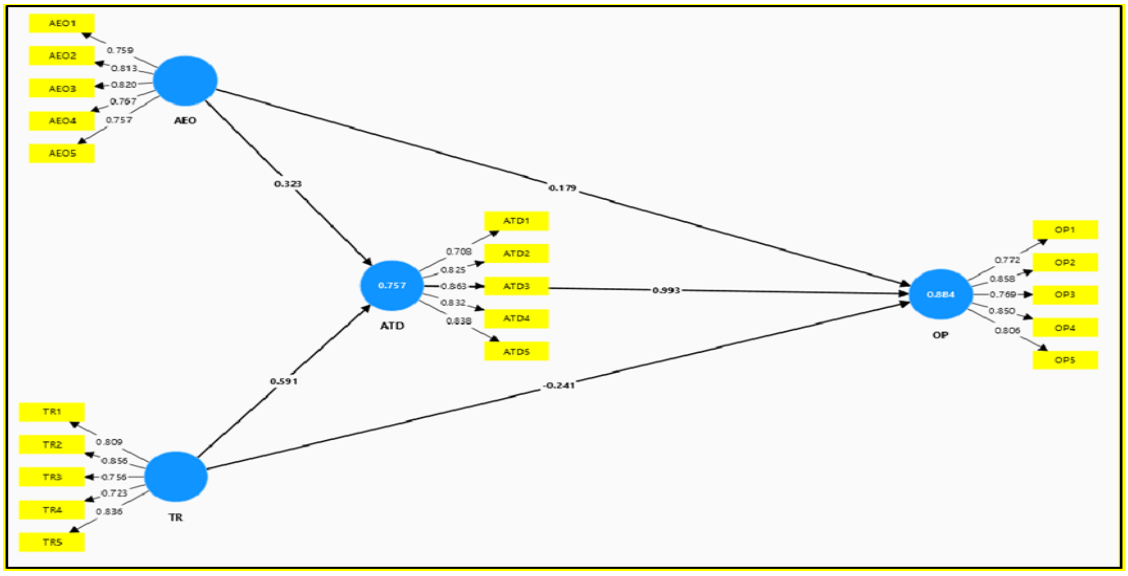

Fig. 2. The structural model – path coefficients

3. Results

3.1 Findings of the Hypotheses Tested

Table 5 presents the results, confirming the support of H1 and five other hypotheses (H1, H2, H3, H4, H5, and H7). The hypothesis H6 was not supported due to a p-value greater than 0.05, which does not match the 95% confidence level.

Table 5
Summary of the hypotheses tested

Item	Hypothesis	T statistics (|O/STDEV|)	P values	Decision
H1	A positive correlation between an agile organizational environment and improved organizational performance.	2.210	0.027	Acceptable
H2	A positive relationship between the technology revolution and organizational performance	2.518	0.012	Acceptable
H3	A positive relationship between adaptability to technology disruption and organizational performance.	11.557	0.000	Acceptable
H4	A positive relationship between an agile organizational environment and adaptability to technological disruption.	2.099	0.036	Acceptable
H5	A positive relationship between the technology revolution and adaptability to technological disruption.	3.988	0.000	Acceptable
H6	Adaptability to technological disruption mediates the relationship between an agile organizational environment and organizational performance.	1.951	0.051	Rejected
H7	Adaptability to technology disruption mediates the relationship between the technology revolution and organizational performance.	3.901	0.000	Acceptable

The study reveals a significant correlation between the relationship between an agile organizational environment (AOE) and organizational performance (OP). The study is based on empirical data from Malaysian agile organizations, rather than a theoretical or abstract claim. The H1 is supported by a path coefficient (β = 0.179), a T-statistic of 2.210, and a p-value of 0.027, indicating a strong correlation between these constructs. An organization's agility, which involves swift adaptation to changes and innovation, directly enhances performance metrics. Agile methodologies enhance organizational performance by promoting flexibility and responsiveness. The study's findings are crucial for strategic planning and operational adjustments in organizations undergoing rapid technological changes, aligning with previous research on the advantages of agility. An agile environment improves organizational adaptability to technological disruptions, enhancing performance outcomes and strategic planning, enabling organizations to thrive in the face of rapid technological advancements and market changes.

The hypothesis H2 supports a significant positive relationship between technology revolution and organizational performance, supported by a path coefficient, T-statistic, and p-value of 0.012. The statistical measures indicate a significant and positive impact of the technological revolution on organizational performance, supporting the hypothesis. Organizations that effectively adopt and execute new technologies tend to perform better. The results have significant implications for organizational strategy and operations, suggesting that embracing technological innovations can enhance efficiency, productivity, and overall performance. [27] research underscores the significant role of digital technologies in driving innovation and enhancing organizational performance, thereby enhancing capabilities and competitiveness.

The analysis found a highly significant relationship ($p < 0.05$) between adaptability to technological disruption (ATD) and organizational performance (OP), with a path coefficient of 0.993. Organizations that effectively adapt to technological disruptions are likely to improve performance metrics and invest in strategies like continuous learning, agile methodologies, and innovation culture. The Beta value of 0.993 indicates a strong correlation between organizational performance and adaptability to technological disruption, indicating that increasing adaptability leads to significant performance improvements. Bala *et al*., [11] emphasize the importance of embracing new IT implementations for enhanced workplace outcomes. Kung *et al*., [29] suggests that adapting organizational processes to technological changes can lead to continuous improvement. Successfully integrating digital transformation strategies during the industry 4.0 revolution improved operational efficiency and market responsiveness, leading to higher performance metrics in organizations.

Akhtar *et al*., [3] highlights that technological capabilities like IT and industrial digitization significantly enhance organizational agility, especially in supply chain resilience and operational agility. Industry 4.0 promotes agile manufacturing and sustainable development, emphasizing the need to utilize technological advancements to adapt to disruptive forces. The hypothesis 4 is supported by a path coefficient (β = 0.323), a T-statistic of 2.099, and a p-value of 0.036, indicating a strong correlation between these constructs. It was a crucial factor in enhancing an organization's adaptability to technological disruptions, emphasizing the importance of cultivating agility for competitiveness and success.

The study emphasizes the significance of embracing technological innovations for enhanced organizational adaptability, thereby ensuring competitiveness and operational efficiency in the rapidly evolving technological landscape. The study reveals a strong positive correlation between technology revolution and adaptability to technological disruption, supported by a path coefficient (β = 0.591), T-statistic (3.988), and p-value of 0.000. Digital technologies significantly transform organizations, necessitating increased organizational flexibility and job shifts, as supported by [31] and [1]. The adaptive structure of technology within organizations is crucial for guiding change and

facilitating adaptation to technological advancements [48]. Innovative technologies can significantly improve organizations' capacity to effectively handle disruptions.

5. Limitation of Study

This study's limitation lies in its focus on the experiences and adaptability of Millennials and Gen Z within their organization. The study may not fully capture the organization's dynamics and response to technological changes from other generations, potentially resulting in biased information. Therefore, the study was limited to analyse adaptability trends, organizational practices, and the impact of technological landscape on organization involvement over a one-month period that allow for a cross-sectional analysis. The study's cross-sectional nature restricts comprehension of the evolution of the relationship between agile practices and organizational performance. Longitudinal studies should be conducted to track changes in organizational performance over time, aiming to understand the long-term impacts of generational adaptability on organizational success. To increase sample diversity and minimize potential biases, it is advisable to involve participants from diverse educational backgrounds. The current study's quantitative approach is insufficient as it primarily focuses on predicting and explaining methods, which is not particularly beneficial for generating practical managerial insights. Further research is needed to understand the impact of agile organizational cultures and technology adaptation on different generational cohorts, including Baby Boomers and Generation X by incorporating qualitative methods like interviews or focus groups to enhance comprehension of adaptability and the experiences of Millennials and Gen Z in agile environments. Researchers can enhance their understanding of the long-term effects and human experiences in agile workplaces through the use of longitudinal and qualitative methods.

6. Conclusions

The proposed theoretical framework and research hypotheses should be tested due to the literature review's reliance on previous research. The research objective 1, 2, 3, 4, 5 and 7 are confirmed because the importance of adaptability in organizational success during rapid technological and digital transformations. The relationship between adaptability and technology disruption significantly influences the relationship between the technology revolution and organizational performance. The hypothesis is accepted due to the robust correlation between the constructs, supported by a path coefficient ($\beta = 0.587$), T-statistic (3.901), and p-value (0.000). The text emphasizes the importance of adaptability in organizations as a key response mechanism to disruptions, enabling them to remain competitive and innovative. The rejected hypothesis 6 and research objective 6 suggests that adaptability to technological disruption does not significantly influence the correlation between an agile organizational environment and organizational performance. The mediation effect revealed that the information was non-significant ($\beta = 0.321$, p-value = 0.051), indicating that the hypothesis was not accepted. The Beta value of 0.321 indicates a weak mediation effect, suggesting a potential but statistically insignificant relationship between technology revolution (TR) and adaptability to technological disruption (ATD). The mediation effect, although hinting of mediation, is not robust across different samples or settings, indicating that it may not be statistically significant. The study challenges traditional agile organizational best practices and suggests alternative strategies for teamwork, change, and performance monitoring to enhance organizational performance.

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