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Strategic Adaptation of Enterprises in Changing Economic Conditions: A Quantitative Analysis Based on COVID-19 Impact

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Abstract: Small and medium-sized enterprises (SMEs) contribute nearly 24% of Azerbaijan's non-oil GDP and represent the overwhelming majority of registered businesses, yet their post-crisis strategic behaviour in a post-Soviet transition economy remains underexamined. The COVID-19 pandemic exposed structural vulnerabilities — supply chain disruptions, limited digital readiness, and uneven access to government assistance — that compelled Azerbaijani SMEs to rapidly reconfigure their strategies. This study investigates how digital transformation, government support, risk awareness, and exposure to international SME practices influenced post-crisis strategic change, drawing on the Resource-Based View, Dynamic Capabilities Theory, and Transaction Cost Economics. A cross-sectional online survey using Computer-Assisted Web Interviewing was distributed to managers of Azerbaijani SMEs operating during 2020–2021 through snowball sampling and direct outreach. After data cleaning, an effective sample of 274 valid responses was retained for analysis, supplemented by ten semi-structured interviews with SME managers. The 37-item instrument was validated through a pilot study with 20 managers, demonstrating acceptable internal consistency (Cronbach's α ranging from 0.78 to 0.89) and exploratory factor analysis explaining 72% of total variance. Pearson correlation and multiple regression analyses were conducted in line with post-hoc power adequacy ($f^2 = 0.15$; 95% power). The regression model explained 42% of the variance in strategic direction change (Adjusted $R^2 = 0.42$; $F = 11.26$; $p < 0.001$). Digital transformation emerged as the strongest predictor ($\beta = 0.37$; $p < 0.001$; $r = 0.46$), followed by application of international SME practices ($\beta = 0.21$; $p < 0.05$). Firm size and annual turnover were statistically insignificant, indicating that adaptive capacity depends on strategic orientation rather than organisational scale. Approximately 60% of SMEs prioritised digital tools, 70% adjusted operations to shifting consumer behaviour, and 70%

accessed at least one government support programme, although the modest correlation of support utilisation with strategic change ($r = 0.29$) suggests limited regulatory effectiveness. The study contributes to the economics–regulation interface by providing empirical evidence on how Azerbaijani SMEs reduced coordination costs through digitalisation, extending RBV and Dynamic Capabilities Theory to transition economies, and informing post-crisis policy design for the Ministry of Economy and SME Development Agency.

Keywords: ME resilience, digital transformation, post-Soviet transition economy, strategic adaptation, government support, Azerbaijan, COVID-19.

Introduction

The COVID-19 pandemic, which began in early 2020, has been a significant test for businesses worldwide, exposing both their strengths and weaknesses in crisis management. Companies have faced unprecedented challenges, including supply chain disruptions, declining consumer demand, workforce displacement, and increased market uncertainty (Juergensen et al., 2020). These harsh conditions have compelled businesses to swiftly reassess their strategies, adjust their operations, and make prompt decisions to survive.

Azerbaijan has a highly developed economy, with small and medium-sized enterprises (SMEs) accounting for nearly all registered businesses, and it is a significant source of non-oil GDP, contributing nearly 24 per cent (Sevda, 2025). Such businesses faced significant challenges in the face of the COVID-19 pandemic due to limited financial support and reduced operating margins (Aliyev et al., 2023). Despite these obstacles, some businesses have demonstrated impressive adaptability by quickly adopting digital tools, adjusting their business models, and leveraging government support (Akbulaev et al., 2020). These responses offer valuable insights into how companies can make informed strategic decisions under pressure. A 2020 International Trade Centre survey of 4,467 companies in 132 countries highlighted the vulnerability of small businesses to the pandemic due to resource constraints. More than half of all businesses reported major disruptions, with nearly two-thirds of micro and small businesses severely impacted, compared with 40% of large firms. Worryingly, 20% of SMEs feared they would have to close permanently within just three months (Lusiantoro et al., 2022). The impact was even more severe in Africa, where two-thirds of businesses reported significant disruptions, falling sales (75%) and supply chain issues (54%) (Muriithi, 2021). Globally, the accommodation and food services industries have been hit the hardest, with 76% of companies in these sectors reporting significant impacts due to lockdown measures. Informal businesses, which are often small and underfunded, are 25% more likely to face bankruptcy. However, government support varies widely (Dube et al., 2021). In Azerbaijan, the pandemic was managed through a Presidential Executive Order on the distribution of assistance signed in March 2020, to address the adverse economic effects of COVID-19 (Valiyev & Valehli, 2022). These legal tools played a pivotal role in ensuring the transparent distribution of assistance and maintaining business continuity. Richer countries tend to offer more assistance, including tax breaks, financial aid and cash transfers. Small businesses tend to focus more on direct financial support, while larger companies focus more on employment programs. In Asia, particularly Indonesia, many SMEs have turned to e-commerce as a lifeline to help them survive, generate more stable profits, and even expand into more profitable market segments. This change underscores the importance of digitalisation for business success (Wijanarka & Sari, 2022).

This study examines the strategic response of Azerbaijani enterprises during the COVID-19 pandemic, focusing on the role of their organisational characteristics, decision-making processes, and external support programs. Like many post-Soviet countries, Azerbaijan is transitioning from a centrally planned economy to a more market-based system, with free market principles and digital business infrastructure still relatively new. Before the pandemic, online commerce and mobile payments were not widely adopted in Azerbaijan; SMEs primarily relied on traditional retail sales, with limited use of delivery

services or online payment systems. In contrast, Amankwah-Amoah et al. (2021) note that Western economies have long embraced digitalisation, with e-commerce, mobile apps, and integrated delivery services becoming standard in business operations. However, the entry of global companies such as Wolt into the Azerbaijani market during the pandemic helped accelerate the adoption of these digital platforms by local SMEs, allowing them to maintain sales channels during the lockdown. In fact, a 2022 study showed that online payment volumes had increased significantly compared to pre-pandemic levels (Taghiyev et al., 2022).

Azerbaijani companies have generally been less prepared for the digital transition than their Western counterparts (Shafiyev, 2024). While companies in the West benefit from more sophisticated digital ecosystems and consumers who are more familiar with online payment and delivery systems, many companies in Azerbaijan face significant challenges due to a lack of digital readiness and infrastructure (Vidadi, 2023). This digital adoption gap is linked to broader economic factors such as differences in regulation, access to finance, and the effectiveness of government support, as highlighted by Purwandari et al. (2022). The recent research also highlights the innovative changes of SMEs in the conditions of pandemic pressure. This is the case of Kahveci et al. (2025), who emphasised the resilience of digitalised companies in Türkiye, as well as the study by Caplanova and Dimelis (2025), which explored the effect of institutional trust on the recovery of SMEs in South-East Asia. According to a comparative review by Kuik et al. (2023), it is also emphasised that a systematic perception of digital transition, financial relief, and regulatory flexibility is key to the long-term sustainability of SMEs. This expanded literature helps situate the study under investigation within the context of developing international research.

A survey among 75 local SMEs found that 92.96% reported either “very negative” or “negative” impacts (Xu & Abbasov, 2021). Seventy per cent of SMEs either completely ceased or scaled back their operations due to the pandemic. The most frequently reported challenges were financial difficulties (65.86%), followed by supply chain disruptions (48.67%) and reduced demand (46.03%). A significant portion (37.23%) also experienced a reduction in sales. This issue should be analysed today, as most recovery policies following the pandemic are being redesigned, and the experience of transitional economies, such as Azerbaijan, remains scarce. Knowledge about SMEs’ adaptation can be used as a lesson in future crises. It can also inform policy formulation strategies in developing markets that are inclusive of all, as well as contribute to the scientific understanding of strategic resilience.

Research Objectives and Questions

The research aims to identify the primary factors that influenced the successful strategic adaptation of Azerbaijani SMEs in the context of the COVID-19 pandemic. The research questions that lead to the analysis are as follows:

RQ1: What is the effect of organisational characteristics on strategic changes?

RQ2: How can digital transformation play a role in strategic adaptation?

RQ3: What is the relationship between government support effectiveness and strategic change?

The objectives of the study are as follows:

1. Assessing the digital transformation effects on strategic change
2. Evaluating the role of government support programs in strategic alignment
3. Analyse the impact of international practices on strategic decision-making
4. Explore the importance of risk awareness in strategic planning

Literature Review

COVID-19 Impact on Businesses

The COVID-19 pandemic has fundamentally disrupted the global business environment, forcing companies, especially small and medium-sized enterprises (SMEs), to reassess and adjust their strategies. Research indicates that a firm's ability to respond effectively to external shocks depends mainly on its strategic resilience and adaptability (Eggers, 2020). These qualities often stem from internal factors such as management agility, digital readiness, and stakeholder engagement.

According to Bartik et al. (2020), the pandemic has resulted in significant revenue losses and operational disruptions for many small businesses in the United States, forcing numerous firms to close temporarily or permanently. The authors emphasise the importance of government support in mitigating these challenges, but also note inequalities in the availability and awareness of such support. Government intervention remains a crucial factor in determining a firm's ability to manage crises successfully. Aidoo et al. (2021) found that firms with a better understanding of existing government support programs were more likely to adjust their strategic plans effectively.

However, gaps in communication and policy targeting have limited the success of these interventions in many developing economies. Shafi et al. (2020) supported this by noting that uneven access to financial support and easing of regulation have led to mixed results for sustainability across sectors. Digital technologies have become a crucial tool for business sustainability, enabling companies to connect with customers, facilitate remote work, and offer online services. Shafi, Liu, and Ren (2020) examined the situation of SMEs in Pakistan and found that those that embraced digital transformation and adopted agile business models adapted more effectively to the crisis. Similarly, Brynjolfsson et al. (2020) argued that the COVID-19 pandemic accelerated the shift to remote work and digital platforms, which could have long-term implications for how companies structure their operations. Donthu and Gustafsson (2020) also highlighted that strategic agility has become a key component of competitive advantage, particularly through the rapid adoption of digital solutions.

In fact, Fairley et al. (2022) found that while businesses such as accommodation faced significant sales losses (up to 91% due to mandatory lockdowns), online sales in California increased by 180%. Guo et al. (2022) further demonstrated that the pandemic resulted in a significant increase in online sales of agricultural products, with the most significant increase observed in smaller online stores. Iordache Platis et al. (2022) found similar trends in Romania, where online sales of durable goods increased during the pandemic, highlighting the role of consumer purchase intentions in driving online adoption, particularly in industries such as electronics.

Government support and policy incentives also played an important role in shaping strategic decisions during this period. Aidoo et al. (2021) found that awareness of and participation in government support programs were strongly associated with higher business survival rates in Ghana. However, the effectiveness of these programs depends on factors such as communication, accessibility, and their adaptation to specific business needs (Ba & Aifuwa, 2021).

Yin and Wang (2021) highlighted that firms operating in volatile environments benefit from observing and adopting strategies from more resilient economies. Learning from global best practices, particularly in areas such as supply chain agility and financial contingency planning, was particularly valuable for SMEs recovering from the pandemic. Carroll and Conboy (2020) argued that the pandemic forced organisations to rethink how they make strategic decisions, especially in the face of tight deadlines and time-sensitive decision-making. They suggest adopting agile methodologies in strategic management, where firms continuously evaluate and adapt their strategies in response to changing external conditions.

Ba and Aifuwa (2021) also noted that companies with robust internal information systems and access to real-time data are better prepared to make timely strategic changes, highlighting the increasing importance of data-driven decision-making for sustainability. This suggests that digital transformation is

not just a technological upgrade, but a strategic necessity in an unpredictable economic environment. In the post-Soviet context, Gukasyan et al. (2022) examined how companies responded to the economic shocks caused by the pandemic and found that approximately 65% of firms adopted dual strategies, balancing cost reduction with strategic investments, resulting in a 30% higher survival rate compared to firms that focused solely on cost reduction. The pandemic has also accelerated structural change, with nearly 70% of businesses surveyed embarking on digital transformation efforts, including remote working and e-commerce adoption, which has significantly reduced revenue losses during the lockdown. Recent studies have broadened this knowledge to various areas. Aassouli and Ahmed (2023) found that the financial literacy of SMEs and access to digital credit services were key determinants of resilience. Li and Ban (2025) explored the use of state-supported innovation funds in maintaining SME activity in China, whereas Wen and Fang (2024) examined how collaborative networks and digital clusters enhanced adaptive capacity. A study conducted by Shamil and Rasul (2021) in Azerbaijan found that the predictability of policies and ease of taxation played a significant role in stabilising small firms in the face of the pandemic. Taken together, these studies provide a broader empirical foundation and strengthen the analytical basis of this review.

Post-Soviet Context

Focusing on the Russian capital regions, Pukinel et al. (2021) found that firms in economically diverse cities experienced smaller declines in economic productivity—about 20% smaller—than firms in less economically diverse regions. Interestingly, more than 80% of firms in large cities increased their digital services, which was associated with a 15% increase in customer retention rates. However, sectors such as retail and services still experienced sharp revenue declines of 25% to 35% on average, suggesting that despite the relative resilience of cities, the pandemic's impact remained uneven across industries.

In a similar study of small businesses in Georgia and Kazakhstan, Fehlings et al. (2025) found that about 55% of small firms faced serious liquidity problems at the peak of the pandemic. However, businesses that benefited from government support programs such as grants, tax breaks, and consulting services were 40% more likely to survive than those that did not receive any support. This was also reflected in the sharp increase in digital adoption: the percentage of businesses using digital tools rose from 18% before the pandemic to 52% during the crisis, highlighting the rapid transition to online operations as an important survival strategy. Additional evidence in Armenia, Uzbekistan, and Ukraine reveals the same adjustment patterns. According to Chooset and Sukhabot (2025), Armenian SMEs that opted to use hybrid sales channels experienced a 25 per cent recovery after the pandemic. A study by Gulamjanovna (2025) also identified that digital training programs facilitated by the Ministry of Innovation have helped boost the profits of SMEs by 18. Abbas et al. (2024) emphasised the importance of e-governance tools in supporting business continuity during times of crisis. Such illustrations provide comparative data on how different post-Soviet economies utilised policy and digital indicators to keep businesses afloat.

Theoretical Framework

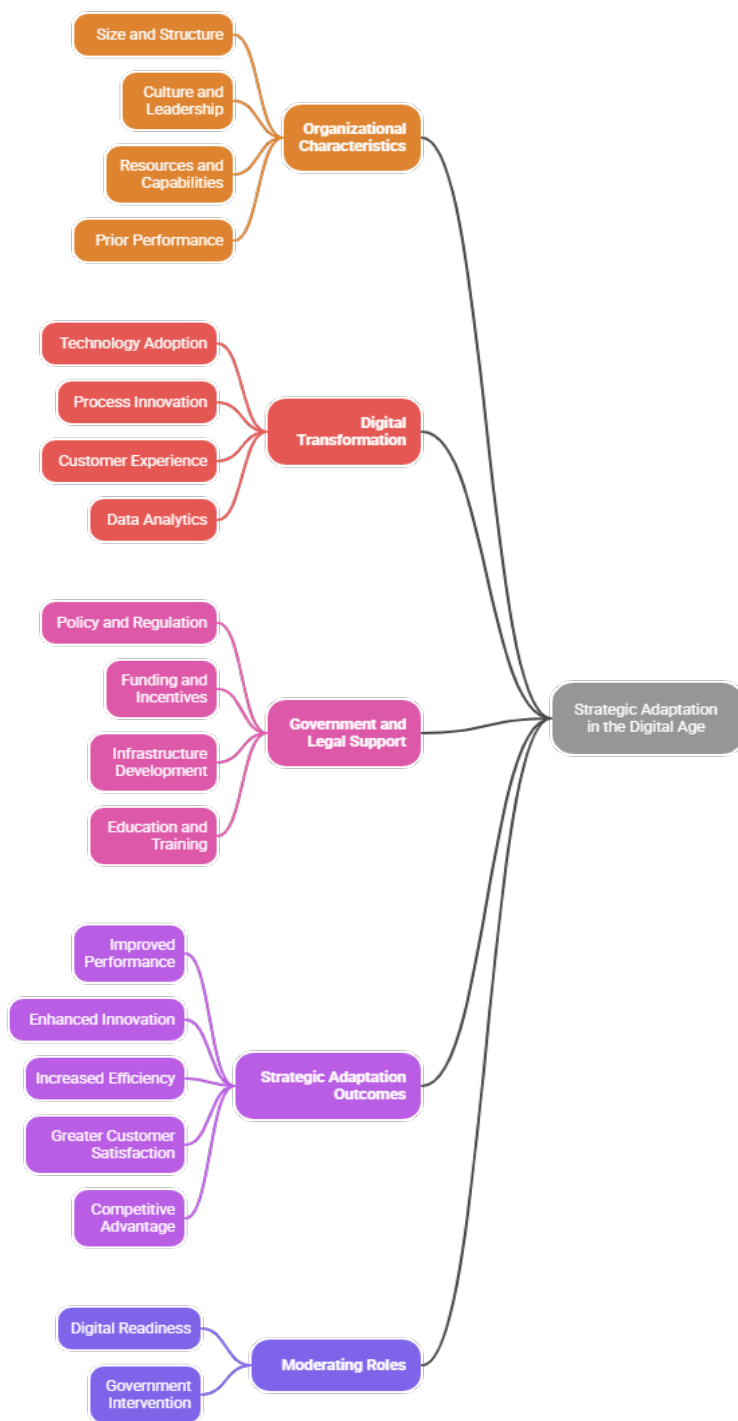
The paper is based on the Resource-Based View (RBV) and the Dynamic Capabilities Theory to discuss the crisis response of firms. According to the RBV (Barney & Clark, 2007), firms can attain a competitive advantage through unique internal resources, such as managerial flexibility and technological capability, even in turbulent environments. The Dynamic Capabilities Theory supplements this (Teece, 2007), which focuses on a firm's capability to integrate, reconfigure, and mobilise resources in continuously evolving situations. Using the COVID-19 example, these frameworks describe how Azerbaijani SMEs utilised digital tools, government assistance, and organisational learning to adapt their strategies. The theoretical model developed in this case combines these theoretical views with empirical evidence from previous studies.

A distinctive feature of this study, compared to the existing literature, is its focus on post-Soviet economies, which differ significantly from the established markets of developed countries. Additionally,

this study examines whether previously unexplored factors — specifically, company size and annual turnover — impact strategic decision-making in the context of the COVID-19 crisis.

Figure 1

Conceptual Framework for Strategic Adaptation



Source: Author's development.

Methodology

To systematically explore how Azerbaijani small and medium-sized enterprises (SMEs) adapted their strategic behaviour during and after the COVID-19 pandemic, this study employed a quantitative survey-based data collection, which enables the identification of behavioural patterns, the impact of

organisational variables, and the influence of external factors, such as government support. The research adopts a cross-sectional approach design, capturing firm-level insights at a specific point in time. It does not allow us to see pre- and post-COVID changes in the way longitudinal analysis would have shown, but it nonetheless provides insights into how businesses changed their behaviour.

The structured questionnaire used in the study was developed based on a literature review. The areas that were covered include demographic profiles, company characteristics, business practices, the degree of strategic transformation during the pandemic, digitalisation efforts, the level of engagement in decision-making processes, and awareness or utilisation of public support programs. To be objective, the strategic change was assessed based on quantifiable variables, including changes in sales revenue, adjustments to the workforce, the number of new digital tools used, and the percentage of online transactions before and during the pandemic. These measures augmented self-reported measures of strategic change.

As the study received no funding and businesses were scattered across various regions, the CAWI (Computer-Assisted Web Interviewing) technique was chosen to collect the data. The author collaborated with the Simple Forms program and shared it with potential participants. Before being sent out, the questionnaire was pre-tested with a small group of respondents to ensure clarity, relevance, and reliability of the items. To evaluate the clarity and internal consistency of the instrument, a pilot study was done on 20 SME managers. Some of the items were simplified, and redundant questions were eliminated based on their comments. The pilot validated the questionnaire's structure and assisted in refining the wording of the scale to facilitate understanding. The reliability testing, with the help of Cronbach's alpha, yielded results ranging from 0.78 to 0.89 among the key constructs, which is relatively good, according to internal consistency standards. The principal component extraction identified six separate factors through exploratory factor analysis (EFA), which explained 72% of the total variance and conformed to the conceptual domains identified in the literature. These findings confirm the validity of the instrument in quantitative analysis.

Given the use of non-probability sampling, the results of this study are limited in their external validity, as the sample may not fully represent the broader population, which may restrict the generalizability of the findings. A low number of semi-structured interviews with 10 managers in SMEs were held after the survey to supplement the quantitative findings. The qualitative information gained through these interviews was on decision-making behaviour and contextual determinants of the overall numerical trends.

Sampling

To recruit participants for this survey, a combination of snowball sampling and direct outreach has been used. This method is non-probabilistic, but it was the most viable during pandemic constraints. To overcome bias, firms from various sectors and regions were encouraged to participate. Future research can utilise stratified or cluster sampling to obtain more representative findings.

This included reaching out via LinkedIn, tapping into the author's previous respondent databases of corporate clients, and checking contact information from publicly available business directories. We specifically targeted individuals who met certain criteria: each respondent had to have at least four years of professional experience, and their company had to be operating during the pandemic (2020-2021). Because the survey required detailed information about the company's operations and strategy, we asked someone in a management or leadership position to respond. Each survey question was designed with either categorical options or Likert-scale responses. The survey was open for a specified period, and reminders were sent to encourage participation. In total, we received 300 completed responses and deleted 26 questionnaires due to respondents who filled them in reluctantly, which may have negatively affected the survey results. A post-hoc power analysis showed that a sample size of 220 was necessary to detect medium effect sizes ($f^2 = 0.15$) at a 95% power and 5% significance level. The resulting effective

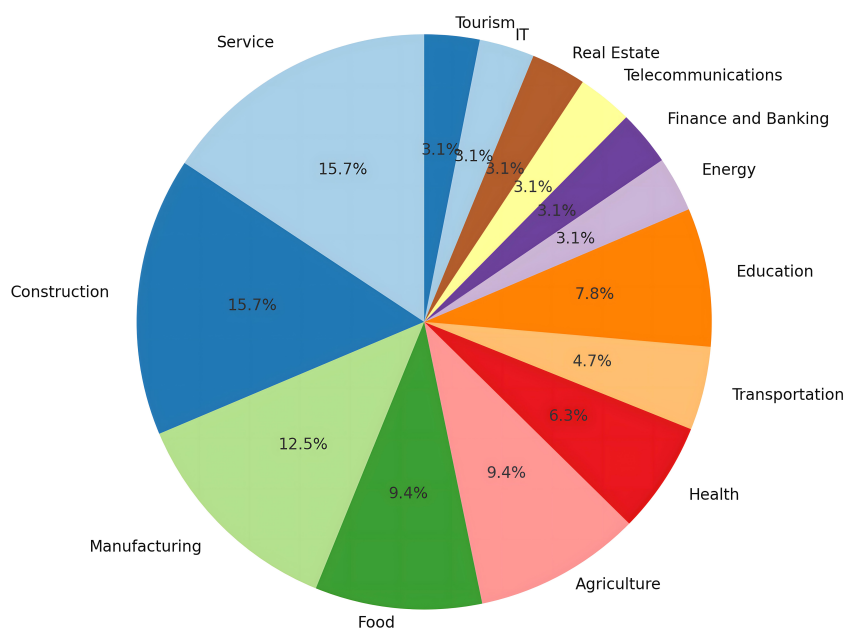
sample of 274 valid responses, therefore, had statistical adequacy to perform correlation and regression analyses with more than two predictors.

Sample Description

The below-mentioned statistics and percentages are adjusted to the structure.

Figure 2

Percentage distribution per sector.



In Figure 2, the Azerbaijani market, and during the survey, an attempt was made to adapt the real statistics of the samples. It is essential to note that most enterprises in Azerbaijan operate as micro-enterprises in the Service, Construction, and Manufacturing sectors. The number of companies located in the Baku region is predominant, highlighting the economic central role of Baku city as the country’s capital. In terms of gender, the majority of respondents were men. This indicates that there are more men in the Azerbaijani workforce.

Dependent Variable

The dependent variable in this study is based on whether the firm reported a change in its strategic direction following the peak of the COVID-19 crisis. The specific question presented to respondents was:

“Did your company change its strategic direction after the peak of the COVID-19 crisis?”

A strategic direction change, which will be used in this research, is the intentional change of strategic goals, business model, market orientation, or operations of the firm. These encompass product or service diversification, new market entries, switching to new digital tools, supply chain restructuring or core strategic objective revision. This operational definition can be easily used to ensure a consistent interpretation among respondents.

Responses were measured on a three-point ordinal scale:

0 = No change

1 = Moderate change

2 = Major change

This variable captures the degree to which firms reoriented their strategies in response to external shocks, recognising that strategic shifts are often gradual and shaped by multiple overlapping influences such as leadership, market evolution, and organisational constraints.

Independent Variables

Independent variables in this study were selected based on previous empirical research in the fields of strategic management, crisis adaptation, and SME resilience. Following the logic of prior research (e.g., Eggers, 2020; Kraus et al., 2020), the independent variables were categorised as follows. To capture internal strategic adjustments, changes in strategic planning practices were asked as a binary item (0 = No, 1 = Yes). The perceived impact of COVID-19 on planning intensity was measured ordinally (1 = Decreased, 2 = No change, 3 = Increased). The reasons for strategic change included multiple factors (e.g., loss of clients, disrupted supply chains, and emerging opportunities). The importance assigned to digital transformation was measured on a 5-point Likert scale. In the next block of questions about government support and awareness, we measured it in a binary item (0 = No, 1 = Yes). Usage level of support programs was ordinal: 0 = None, 1 = Single program, 2 = Multiple programs. Moving to items on risk consideration and decision-making, the degree of risk consideration in strategic decisions was measured on an ordinal scale (1 = Not at all, 5 = Very much). Awareness of international SME practices was binary (0 = No, 1 = Yes). Application of international SME practices was ordinal: 0 = Not applied, 1 = Occasionally, 2 = Fully applied.

Results

The paper is presented in two sections: the first section presents the empirical results, and the second section provides an analytical discussion that connects the findings to both the theory and the international evidence, considering that 96.8% of enterprises in Azerbaijan are micro-sized, as Marja. Az (2024) noted that a significant proportion of respondents belong to this category, while 2% are small enterprises and 0.8% are medium-sized enterprises. During Table 1 of the survey, quotas were attempted to adapt to these statistics to achieve higher accuracy.

Table 1

Business types in the sample

Business Type	Quota (Respondents)	Percentage (%)
Micro Business (1 - 9 employees)	237	79.0%
Small Business (10 - 49 employees)	50	16.7%
Medium Business (50 - 249 employees)	10	3.3%
Large Business (250+ employees)	3	1.0%

The distribution reflects the workforce of Azerbaijan, where men predominate. As expected, the majority of enterprises (83.3%) are located in Baku, the economic centre of Azerbaijan, while other regions are less represented in the sample (Table 2).

Table 2

Composition of regions in the sample

Region	Quota (Respondents)	Percentage (%)
Baku	250	83.3%
Sumgait	10	3.3%
Ganja-Qazakh	15	5.0%
Sheki-Zagatala	5	1.7%
Other regions	20	6.7%

Table 3*Composition of legal forms of businesses in the sample*

Legal Form	Quota (Respondents)	Percentage (%)
Limited Liability Company (LLC)	180	60.0%
State-Owned Enterprise	30	10.0%
Foreign Company Branch	20	6.7%
Individual Entrepreneur	60	20.0%
Others	10	3.3%

The majority of businesses in Azerbaijan are registered as Limited Liability Companies (LLCs), followed by individual entrepreneurs (20%). State-owned enterprises and foreign branches make up a smaller percentage of businesses (Table 3).

Considering the majority of micro businesses, it was expected that most businesses would fall into the less than 50,000 AZN revenue category, with some companies earning higher revenues. It is essential to note that the annual revenue reported in this survey may not accurately reflect the companies' true financial position. Due to concerns about tax implications and the sensitivity of financial data, some businesses may underreport their actual revenues during the survey period. As a result, the findings may not fully reflect the full picture of the economic performance of these companies (Table 4).

Table 4*Annual revenues of businesses in the sample*

Annual Revenue	Quota (Respondents)	Percentage (%)
Less than 50,000 AZN	200	66.7%
50,000 - 200,000 AZN	70	23.3%
200,000 - 1,000,000 AZN	20	6.7%
More than 1,000,000 AZN	10	3.3%

Regarding demographics, annual turnover and the number of employees were controlled (Tables 5 and 6).

Table 5*Descriptive statistics*

x	N	Minimum	Maximum	Mean	Std. Deviation
Number of Employees	300	37.00	40.00	39.43	0.779
Annual Turnover (indicated in thousands, AZN)	300	120.00	150.00	130.89	10.906

Table 6*Pearson correlation matrix*

Variables	1	2	3	4	5	6
1. Post-COVID Strategic Direction Change (DV)	1.00					
2. Importance of Digital Transformation (A11)	0.46	1.00				
3. Awareness of International SME Practices (E1)	0.32*	0.41	1.00			

4. Application of International SME Practices (E2)	0.29*	0.38	0.58	1.00		
5. Utilization of Government Support Programs (B2)	0.29*	0.33*	0.27*	0.36*	1.00	
6. Number of Employees	0.14	0.18	0.12	0.21*	0.10	1.00

According to the correlation matrix, digital transformation and awareness of international SME practices have a strong correlation with changes in post-COVID strategic direction. There was also a moderate positive relationship in the utilisation of government support, which means that policy assistance was significant in influencing the responses of firms. The correlation with firm size is low, indicating that it was not only scale that determined adaptability. In general, these findings affirm that digital preparedness and institutional involvement were pivotal to the strategic changes of firms in the aftermath of the crisis.

Discussion

Overall, the sample firms had an average annual turnover of 130.89 thousand AZN and about 40 employees. Although micro businesses are expected to have up to 9 workers, many reported collaborating with more than 10, often without officially registering them. This raises ethical and legal concerns about unregistered employment. The study handled such responses confidentially and underscores the need for stronger regulation and fair labour practices. Consequently, the data used in the survey are rather informal and practical in nature, as opposed to formal documents. This conclusion, particularly when considering aspects such as the tax burden conditions, is a success of the study in getting more realistic data.

A Pearson correlation analysis was conducted to explore the relationships between the dependent variable, Post-COVID Strategic Direction Change, and key independent variables, including perceptions of digital transformation, exposure to international SME practices, utilisation of government support, and organisational characteristics.

The analysis suggests reveals a moderate positive correlation between the importance of digital transformation and strategic change ($r = 0.46$, $p < 0.01$), indicating that firms prioritising digitalisation were more likely to adjust their strategies following the pandemic. According to the guidelines provided by Cohen (1988), this is a moderate to strong effect. Its reliability is supported by a 95% confidence interval (0.310.58), and it was also significant even after Holm-Bonferroni correction. This finding underscores the role of technological readiness in organisational adaptability, consistent with global trends where firms shifted to online operations despite limited pre-pandemic digital adoption in Azerbaijan. Awareness ($r = 0.32$, $p < 0.05$) and application ($r = 0.29$, $p < 0.05$) of international SME practices were also positively linked with strategic change, suggesting that globally oriented firms adapted more effectively. This emphasises the importance of international learning in Azerbaijan's developing SME environment.

Government support programs exhibited a modest positive correlation with strategic change ($r = 0.29$, $p < 0.05$), indicating that access to external assistance facilitated the adaptation of some firms. Approximately 70% of SMEs utilised at least one form of support; however, the weak correlation suggests that limited coverage and awareness reduced overall effectiveness. To determine the predictors of strategic change, a multiple regression model was estimated, with post-COVID strategic direction change as the dependent variable. The independent variables were the importance of digital transformation, international practice awareness and implementation, government support, and the size of the firm.

The model explained 42% of the variance (Adjusted $R^2 = 0.42$, $F = 11.26$, $p < 0.001$). Digital transformation ($\beta = 0.37$, $p < 0.001$) and international practices ($\beta = 0.21$, $p < 0.05$) were the strongest predictors, while firm size and turnover were insignificant, confirming that adaptability depends more on strategic orientation than scale.

Variables such as the number of employees and annual turnover showed weak or no correlation with strategic change, indicating that firm size and revenue were not strong predictors of adaptability. About 60% of SMEs considered digital transformation “very important” during the pandemic, and 25% implemented digital tools to some extent. Firms that use online sales, remote work, and cloud systems have adapted more effectively, a key finding for Azerbaijan, where digitalisation remains uneven. Survey results indicate that 75% of SMEs regularly consider economic risks, reflecting a strong awareness amid economic instability. Most SMEs (66.7%) earned less than 50,000 AZN annually, indicating that adaptability depended more on leadership and internal resources than on revenue or size. Around 60% of decision-makers expressed interest in foreign markets, 70% adapted to changing consumer behaviour, and 45% strengthened strategic planning. This openness to global models is vital in Azerbaijan’s transition economy, where local practices remain underdeveloped. These results are partly consistent with the research conducted by Wen and Fang (2024), who also discovered the presence of digital readiness as a fundamental force of SME adaptation. This finding is also consistent with other research by Kraus, Breier, and Dasí-Rodríguez (2020) in Europe and Eggers (2020) in the United States, which found that crisis-driven innovation was strongest in digitally proactive SMEs. However, in contrast to research in more institutionally advanced economies (e.g., Caballero-Morales, 2021), Azerbaijani companies lacked such a policy and financial basis, which limited the long-term effect of strategic adaptation. This deviation indicates situational limitations typical of post-Soviet transition economies. In general, the findings not only confirm international evidence on digital resilience but also refute the assumption of homogeneous institutional support, which forms a distinctive pattern of partial convergence and structural divergence. Nonetheless, in comparison to those settings, there was less institutional support of Azerbaijani SMEs, which constrained the long-term advantages of adaptation. This analogy highlights the similarities between digital trends and the dissimilarities in structural conditions.

The results also support key economic theories, such as Transaction Cost Economics (TCE) and Market Structure and Competition Theory, while providing new insights into business adaptation during the COVID-19 pandemic. A more thorough theoretical explanation is that digital transformation can be viewed in light of the assumption of TCE, which aims to reduce coordination costs. Additionally, the motivation to innovate during a crisis can be relevant to the theory of creative destruction developed by Schumpeter. Moreover, the theory of Resource-Based View (RBV) assists in describing how the internal resources (leadership and knowledge) served as non-financial resources that facilitated resilience. The findings thus combine various theoretical perspectives in addition to TCE and competition theory, which offer a more analytical basis. In addition to these frameworks, the results are also in line with the Dynamic Capabilities Theory, which focuses on a firm's ability to integrate, create, and restructure internal competencies within rapidly changing environments (Teece, 2007). The adaptive capabilities of Azerbaijani SMEs that overcame the structural weaknesses were achieved through limited digital and managerial resources. This helps explain that the adaptability of a crisis is less dependent on the size of the firm and more on its flexibility and learning ability. Nevertheless, these correlations are not causal because the cross-sectional nature of the study only measures correlations, but not the time sequence of change.

Transaction Cost Economics (TCE) argues that firms seek to minimise transaction costs. This study supports that view, showing that SMEs using digital tools were more adaptive. The strong correlation between digital transformation and strategic change ($r = 0.46$) indicates that digitalisation reduced coordination and operational costs, aligning with TCE.

Market Structure and Competition Theory also applies, as many small, resource-limited SMEs in Azerbaijan innovated under pressure. About 60% prioritised digital tools and 70% adjusted strategies to shifting consumer behaviour, showing innovation in imperfectly competitive markets.

The study also reveals new insights: firm size and revenue had little effect on adaptability—even low-income microenterprises adapted through leadership and technology, challenging assumptions

about the resilience of large firms. Internal resources, such as leadership and decision-making, proved more important than government support, which 70% utilised but with limited effect.

Conclusions

This section concludes the study by addressing each research question and connecting findings with theoretical and policy insights. The study examined how organisational characteristics, digital transformation, and government support influenced post-COVID strategic adaptation among Azerbaijani SMEs.

First, in response to RQ1 and RQ2, the results showed that firms with structured strategic planning, proactive leadership, and a clear vision were more adaptable. This aligns with the Resource-Based View (RBV), confirming that internal managerial capabilities and data-informed decision-making drive resilience more than firm size or revenue.

The findings fully align with the research objectives, demonstrating that digital transformation and learning from international practices were central drivers of post-pandemic strategic change. SMEs that integrated digital tools and global best practices were better able to maintain operations and competitiveness despite market disruptions.

This study contributes theoretically by combining Transaction Cost Economics (TCE) and Dynamic Capabilities Theory. It shows that SMEs in Azerbaijan reduced transaction costs through digitalisation and built dynamic capabilities by reconfiguring internal resources and learning from crisis experience. This provides empirical support for extending these theories to transition economies, where institutional settings differ from those in developed markets.

Policy recommendations emphasise strengthening SME strategic planning, digital readiness, and awareness of government support. The government should establish a unified SME digital support platform, expand training on crisis management, and simplify access to funding programs through transparent online systems. Targeted incentives for digital infrastructure and managerial skill development would make transformation more affordable and inclusive.

Policy implications for the Government of Azerbaijan underscore the need for improved coordination among the Ministry of Economy, the SME Development Agency, and innovation funds. Encouraging international benchmarking, export diversification, and public-private partnerships can enhance resilience and global competitiveness. Future research should track these adaptive processes longitudinally to assess how digital and strategic capabilities evolve beyond crises.

Limitations

Findings must be interpreted with care. First, the sample is not representative of the entire private sector in Azerbaijan—the author of the study conveniently sampled participants using a non-random sampling method. Secondly, because it was an online survey, participants did not have the opportunity to ask questions when they had unclear moments, which may have affected the validity of the findings. Also, it is worth noting that the survey design in this study relies on ordinal and binary response formats, which limits the ability to perform more advanced statistical techniques such as regression analysis and structural equation modelling. The lack of continuous variables and the restricted nature of the response options prevent the establishment of definitive causal relationships and the accurate measurement of latent constructs, which are necessary for these complex analytical methods. The other limitation also concerns the bias of self-reporting, as respondents may exaggerate positive results or minimise challenges due to the influence of social desirability or misinterpretation of themselves. The data is also cross-sectional and thus less useful in analysing time, as it cannot be used to determine the evolution of strategic behaviour over time. Additionally, the results are not generalizable because they are specific to Azerbaijan, with its unique cultural norms, institutional frameworks, and market environments that differ from those of developed economies. Similar contextual and time-dependent restrictions ought to be considered in future longitudinal and cross-country studies.

Suggestions for Future Research

The limitations of this study and the development of the new aspects of SME resilience in Azerbaijan can become the focus of future studies. To begin with, longitudinal research is required to explore the development of strategic adaptation and digital transformation. This panel study would enable us to observe the same SMEs over several years, allowing us to understand the causation and long-term implications of digital adoption and international practices.

Second, the role of self-reporting bias and the informal employment practices should be investigated systematically in future studies. It might have research questions such as: How does informal employment impact strategic adaptability? And to what extent does self-perception of risk impact actual decision-making in SMEs? Mixed-method designs, which combine surveys and in-depth interviews, may help identify both quantitative patterns and qualitative explanations.

Third, there is the issue of cultural and contextual factors, which warrant further exploration. As an example, how do local norms and managerial culture affect the adoption of digital tools and international practices? Comparative research with SMEs in other post-Soviet economies would help to outline common difficulties and specific issues in these nations.

Lastly, specific interventions, such as digital training programs or government support schemes, could be tested using experimental or quasi-experimental designs to evaluate their impact on SME performance. These methods would help determine the processes of resilience and innovation, providing policymakers and managers in Azerbaijan and other transition economies with actionable advice.

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