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Article

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Navigating crisis: SME strategies for risk mitigation through strategic upgrading

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ABSTRACT

This research investigates the strategic responses adopted by Hungarian small and medium-sized enterprises (SMEs) in the face of an adverse socio-economic environment. Focusing specifically on B2B firms, the study examines how the current crisis compels managers to mitigate the risk of buyer attrition. This analysis leads to the identification of four distinct adaptation strategies employed by these firms. Furthermore, the research delves into the concept of 'upgrading' challenging the prevailing notion that product development is the sole pathway for upgrading. The results suggest that effective upgrading can be initiated from various aspects of the firm's operations. This novel perspective suggests that upgrading can be a viable strategy for firms seeking to escape from a captive supplier position, by improving either functionality or resilience. This is a new perspective that goes beyond what could be expected from the literature. The findings provide useful insights for policymakers and practitioners seeking to improve the performance of SMEs in the current dynamically shifting B2B landscape.

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1. Introduction

Global Value Chains (GVC), as a new way of exploiting the benefits of global trade, have been a popular research topic, including the study of vertical specialization and the fragmentation of production processes (Brancati et al., 2017). Former global events, notably the COVID-19 pandemic, turned academic interest to the reconfiguration of GVCs (Ndubuisi & Owusu, 2022), in particular, to understand the drivers as well as their possible consequences. This brought micro and small enterprises to the forefront, as they are the most vulnerable when the supply chain is shortened (Canello et al., 2022).

Not long ago, the SARS-CoV-2 (COVID-19) presented the entire world with a challenge more difficult than the financial crisis of 2008-2009, affecting both supply and demand (Fonseca & Azevedo, 2020). In the middle of the economic recovery, however, Europe faced a new challenge: the war in Ukraine. The war further intensified this scrutiny, revealing unforeseen challenges and hindering the post-COVID-19 recovery (Dijkstra et al., 2022). The negative effects of the war, particularly in the form of commodity shortages and energy price shocks, had an immediate adverse impact on the global financial system (Sokhanvar & Lee, 2023) and led to an increase in global inflation of about 1.3 percentage points (Caldara et al., 2022).

In addition to the inflationary pressures, the absence of Russia and Ukraine as key players in the global value chain had a cascading effect on industries worldwide, ranging from food and construction to petrochemicals and transportation (Guenette et al., 2022). The economies of Central and Eastern Europe (CEE) have long specialized in manufacturing. This means that they will be hard hit by any recession that the war may bring to the region. As a result, locally owned small and medium-sized enterprises (SMEs) are expected to suffer most from the long-term, large-scale negative effects of the war (Prohorovs, 2022).

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Our understanding of how to exploit opportunities in such a challenging environment is still relatively limited. On the one hand, previous research suggests that challenging environments typically limit the ability of individuals to identify market gaps or unmet needs, as well as to develop innovative strategies that can lead to their exploitation (Santos, 2023). On the other hand, research on the entrepreneur as a person has shown that resilience at the individual level is a necessary condition for coping with adversity (Duchek, 2020; Gottschalck et al., 2024). However, there is a lack of knowledge about the determinants of firm-level resilience as a condition for thriving in a challenging environment (Korber & McNaughton, 2018).

In their literature review, Cortez and Johnston (2020) concluded that previous studies on crisis management focused primarily on managing risks caused by the organization's internal processes, such as negligent behavior, but the organizational and strategic aspects of economic downturns lack scholarly attention. It is well known that an economic recession is a very decisive event that usually causes major changes in the life of organizations (Kim, 1998; Miller & Friesen, 2007, 1983), yet relatively little research investigates how managers can successfully deal with the challenges posed by the recession (Latham & Braun, 2011).

Yet, empirical studies of SME strategic formation and execution in order to adapt to difficult situations and achieve competitive advantage are scarce (Quansah & Hartz, 2021). Furthermore, despite strong criticism, a positivist quantitative method is still often used (Bellamy et al., 2019; Ryan, 2006), with constructs limited to how leaders engage with members of their organization or how they formulate strategy (Hart & Banbury, 1994). This points to the need for additional qualitative research to improve our understanding of how SMEs formulate adaptation plans to deal with recurring difficulties in a challenging environment (Bellamy et al., 2019).

This gap in the literature calls for further research to explore the specific strategies and mechanisms that SMEs use to overcome challenging circumstances and gain a competitive advantage. Moreover, understanding the role of innovation for SMEs competing for a better position in their global value chains can provide valuable insights for policymakers and practitioners seeking to improve domestic SME performance in today's dynamic business environment.

The purpose of this study is to answer the question 'What potential development paths can B2B SMEs take to improve their competitiveness or secure a more defensible market position in a highly volatile and uncertain macroeconomic environment?' By analyzing these potential development paths, the research offers practical recommendations for Hungarian B2B SMEs seeking to mitigate the risk or impact of buyer attrition in an adverse socio-economic environment. This analysis delves into the decision-making processes that lead to the formation of distinct strategy patterns. For practitioners, the results can be used to benchmark their current position against their peers, develop a more defensible market position through potentially replicable strategies, and reduce vulnerability by better understanding the strengths and weaknesses of current capabilities. For policymakers, the identification of these potential evolutionary paths provides a valuable tool for designing targeted support programs, encouraging and incentivizing proactive behavior, and facilitating the transfer of knowledge and best practices among firms, ultimately fostering a more resilient business ecosystem.

The study makes several contributions to the existing literature: First, the systematic analysis of interviews with top managers of 62 majority Hungarian-owned B2B firms revealed four different adaptation strategies in response to the economic recession. Second, upgrading is not only possible but also a viable strategy for firms wishing to escape the position of captive supplier. Third, contrary to the literature, there is more than one way to upgrade. Effective upgrading can start from several different places, but investments in product development and process improvements, which are often mentioned in the literature, are not among them. In addition, upgrade strategies evolve rather than being planned. But they're not just a matter of luck. As the saying goes, 'fortune favors the prepared': firms need to be proactive by taking advantage of opportunities to upgrade their positions.

The article is structured as follows: we begin by reviewing the literature on global value chains and making connections between strategy formation and configuration studies. In the section on research methodology, we provide an overview of the data collection process and explain the selection criteria for our sample along with sample characteristics. Additionally, we discuss the research methodology employed, including the analytical framework used to analyze the data. Finally, we comprehensively present the findings, highlighting key themes and patterns that emerged from our analysis. The implications

of these findings for both academia and industry are then discussed, along with suggestions for future research directions in this field.

2. Literature review

2.1. Value, value-added, and the global value chains

According to Porter (1985, 1996) an enterprise can only outperform its competitors over the long term if it can deliver more value to its customers over time. In case the enterprise has similar resources to its competitors, it must develop heterogeneous capabilities, i.e., through doing differently. The term 'value chain' is widely used in research and practice to refer to interconnected value chains of firms, although Porter originally referred to such a chain of values between firms as a value system (Feller et al., 2006). As the name implies, the Global Value Chain typically consists of a very complex, international network of suppliers with a high degree of functional integration of dispersed activities (Golini et al., 2016). A GVC is also assumed to be a buyer-driven network, where the output specifications are provided by the buyer (Gereffi, 1994).

In the literature, Global Value Chain (GVC) and Global Supply Chain (GSC) are often used interchangeably, but they differ in that the former provides an overview of value-added activities, while the latter provides an overview of the input-output flow of the entire supply network (Golini et al., 2016). As defined by Lambert et al. (1998) the value chain consists of its primary members, those who directly contribute to the transformation of inputs into outputs by performing value-adding activities for a customer or market.

Scholarly effort was made to differentiate the members based on their location within the chain. A chain is considered to be long with several tiers, or short with a few tiers. An enterprise can be positioned at or near the initial supply or be at or near the ultimate customer, or somewhere in between (Lambert et al., 1998). Similarly, former research also investigated thoroughly which members of the GVC reap more benefit¹, i.e., profits, and noted that different functions contribute unevenly to the value of the finished product (Mudambi, 2008; Rungi & Del Prete, 2018; Shin et al., 2012; Singer & Donoso, 2008). This non-linear, U-shaped relationship between the value added generated by firms and their position on a productive sequence is also known as the smile curve (Rungi & Del Prete, 2018), which is illustrated in Figure 1.

Figure 1. underscores the notion that the smile curve has recently become steeper (Durand & Milberg, 2020). There is a shift from the relatively flat smile curve of the 1970s to a steeper one. The reason for this is that there are 2 trends today: First, the expansion of low-cost suppliers has led to a massive increase in production capacity worldwide, further reducing the bargaining power of these suppliers. Thus, the dip in the middle of the smile curve is related to the fierce competition these companies now

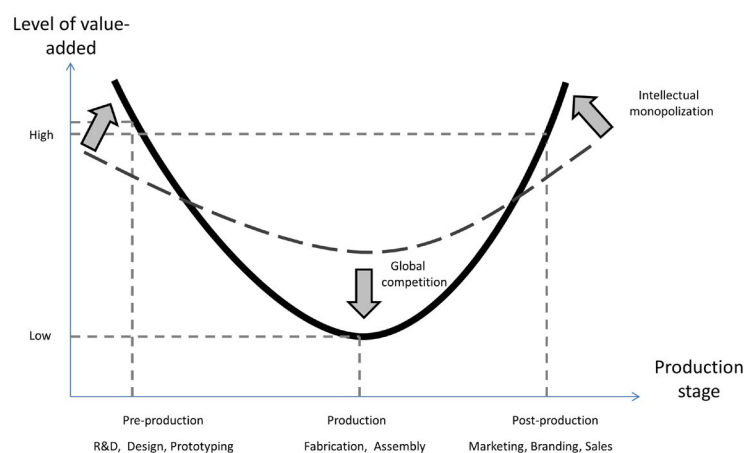


Figure 1. The trend towards a deeper smile curve in value chains.

Source: adapted from Durand & Milberg, 2020.

face. The second trend is the increasing share of knowledge-intensive intangible inputs (often protected by patents) in the production of physical products. The value of the raw materials, labor, energy, and other physical inputs that go into making a product is typically much less than the cost of the intangible assets embedded in that product, such as original design, technological know-how, computerized information, and brand. These intangibles are key to generating sufficient market demand, and thus there is more value added at both ends of the smile curve (Ali-Yrkkö et al., 2011; Dedrick & Kraemer, 2017). The pressure to steepen the S-curve is also known as intellectual monopolization, which refers to the power of the owners of intangible assets to control how those assets are used for production (Quentin, 2023).

Consequently, manufacturing is found to capture the least share of value added (Antràs & Chor, 2013; Dedrick et al., 2010). The term ‘captive supplier’ refers to firms that, according to the literature, are trapped in a low-value-added position in the value chain because of significant power and knowledge asymmetries between them and the lead firm. Ultimately, they become overly dependent on the lead firm (Buciuni & Pisano, 2021). The more intensely a firm is integrated into a GVC the lower its markup is (Choi et al., 2021). In such cases, the supplier may have limited bargaining power and may be forced to accept unfavorable terms, such as lower prices or longer payments. This can harm the supplier’s profitability, ultimately affecting its ability to invest in innovation or improve its operations (Ambos et al., 2021).

The GVC literature is rich in studies at the level of industries, regions, or countries, but it is rather limited on firm-level strategies for building capabilities in GVCs (Agostino et al., 2015; Hansen et al., 2023; Whitfield et al., 2020). Most of the empirical studies conducted in the CEE region concluded that the innovation activities of SMEs are rather sporadic (Török, 2009) and the allocation of upgrading value is limited (Szalavetz, 2017). It can be assumed that the picture is more colorful considering that the majority of studies have examined the development efforts of the Hungarian subsidiaries of multinational companies (For example: Sass & Szalavetz, 2014)). The literature has also revealed success stories when, for example, a supplier was able to upgrade itself to the position of a leading firm by acquiring companies at the forefront of technology (Hansen et al., 2016). Scholars are therefore urged to open the black box of local firms and conduct empirical studies on the relationship between business strategies and upgrading pathways (That is: Hansen et al., 2023; Sako & Zylberberg, 2019).

In the GVC literature, the concept of industrial upgrading describes the upward move of an economic actor – which could be a nation, a firm, or even a worker – from lower value-added activities to higher value activities (Gereffi, 2005). A typical form is process and product development among suppliers often stimulated by process and product standards set by the buyer (Hansen et al., 2023). In the case of process upgrading, the firm invests in improving efficiency through superior technology or reorganization of production, while in the case of product upgrading, the firm seeks to improve the quality of its output. Less typical is functional development, i.e. the acquisition of new, higher value-added, and thus higher revenue-generating functions. Nevertheless, the contemporary model of the assembler-supplier relationship emphasizes that the most important suppliers are invited to participate in research and development (R&D), however, these are typically a small number of Tier 1 companies (Pavlínek & Ženka, 2011) but the lead firm is still in charge (Buciuni & Pisano, 2021).

Finally, channel expansion occurs when a firm enters one or more new end markets, let it be domestic, regional, or global. Typically, this is a response to changing market conditions and helps the firm minimize its exposure to price and demand volatility (Dunn et al., 2006). According to recent findings, suppliers are becoming more thoughtful about their options for supplying several chains at once, even when those supply chains may overlap (Horner & Nadvi, 2018; Pasquali et al., 2021).

Zhou et al. (2022) noted that emerging market firms typically follow the ‘In-out-in’ upgrading strategies in GVCs. First, they enter the chain at low-end production. Once they gain technical capabilities with the help of the lead firm, they typically try to establish their own local value chains. Once they succeed, these firms seek to reintegrate into the GVC with the aim of occupying a higher value-added position. While there are a few notable examples (Lechner et al., 2020), it is still uncommon for suppliers to have the ability to either acquire or outbid their order-giving companies (Li, 2020).

Nevertheless, the rising rates of value capture at either end of the curve do not necessarily imply that upgrading efforts lead to income redistribution; often, an increase in adding value does not lead to proportionately rising profits (Szalavetz, 2017). The value created can be appropriated away from the supplier if the lead firm is able to dictate pricing terms (Dindial et al., 2020). Others have shown that in

GVCs where production volumes are high and economies of scale are important, such as in the automotive GVCs, existing structures and power relations are likely to be reinforced and remain unchanged in spite of upgrading efforts. Moreover, in these industries, the main form of upgrading is process upgrading (Rehnberg & Ponte, 2018).

2.2. The adaptation strategies

Sako and Zylberberg (2019) noted that the corporate strategy of non-lead firms receives little attention in current GVC frameworks. Our understanding of how suppliers deal with lead firm constraints and environmental conditions remains incomplete. Further research is needed to gain a comprehensive understanding of how suppliers cope with these constraints. In addition, exploring these supplier strategies and adaptations across industries can provide valuable insights for both academics and practitioners.

The competitiveness of the firm, in addition to its resources and related capabilities, is made possible by macro-level factors that are the result of the macro-environment (Attila Chikán et al., 2022). There is no doubt that recessionary conditions pose serious threats to SMEs, however, even in the most restrictive and deterministic environments, organizational choice exists (Hrebiniak & Joyce, 1985; Sausen et al., 2022). Therefore, SMEs are not simply passive victims of external forces. At the very least, they will try to find a position in their industry where competitive forces are least harmful or most beneficial to them (Porter, 1980). However, previous studies have also reported that learning and accumulating competence are prerequisites for adapting (i.e., Archibugi et al., 2013; Bartoloni et al., 2021; Szalavetz, 2013a).

In a complex and changing environment, the human mind cannot design coherent patterns of action in advance. Rather, strategy makers tend to form umbrella strategies in which courses of action are deliberately predetermined but details emerge as events unfold and the participants in the process become more insightful (Mintzberg, 1994; Sanchez, 1997). According to this view, strategy formation is essentially a learning process in which the feedback from implementation triggers the modification of intentions along the way, resulting in an evolving strategy. The environmental opportunities are pre-filtered and the firm's circumstances, position strategies, and available resources largely determine which one is the optimal to strike (Sheehan & Foss, 2017). The first choice limits the number of available opportunities that the firm can exercise in the future rendering certain opportunities irrelevant. Consequently, the pattern of the strategy is outlined by the sequence of decisions made about which opportunity to strike (Bowman & Hurry, 1987, 1993). From this perspective, these choices constrain the scope of the firm's activity (e.g., who to serve and who not to serve, what to serve and what not to serve) and ultimately limit the firm's repertoire of actions. Managers are therefore under increasing pressure to rethink their strategies when the firm's environment becomes more unpredictable.

There has been a growing scholarly interest in how to effectively craft firm strategies in times of crisis (Su & Junge, 2023). Recent events, such as the Covid-19 pandemic and the war in Ukraine, have highlighted the significant impact that major adverse events can have potentially leading to business failure (Khlystova et al., 2022; Sharma et al., 2024).

Leonelli et al. (2024) found that there are significant differences between the resilience of SMEs and large firms. The resilience of SMEs, due to their smaller size, is often related to the personal resilience of the entrepreneur running the firm. Situational awareness, which refers to a better understanding of the factors that triggered the crisis and of the internal and external resources available to deal with the challenges that the crisis may bring, harms firms' resilience. Entrepreneurs with a strong situational awareness can sometimes adopt a rigid approach that can hinder the firm's ability to deal effectively with crises. The responsibility of smallness also means that the attitudes and behaviors of leaders reinforce smallness (Morris, 2020). Yet some firms manage to find legitimate ways to perform better in disrupted, declining markets (Thomas & Douglas, 2024).

Recent exogenous events have caused severe disruptions and drastic changes in the business environment, challenging global supply and value chains and forcing companies to rethink their sourcing strategies and supplier base (Li, 2020; Tsai & Urmetzer, 2023). In addition, these exogenous events have prompted lead firms to consider mitigating risk by prioritizing local sourcing and onshoring. As a result,

these events have highlighted the vulnerable position of many low value-added suppliers and the need to improve their resilience.

Brancati et al. (2017) analyzed the ex-ante adaptation strategies of firms and found that high learning and innovation capability on the one hand, and access to export activities on the other hand, increased the probability of upgrading. However, industry conditions (i.e., turbulence or shocks) have a strong influence on the upgrade decision (i.e., Allred & Steensma, 2005; Nadkarni et al., 2011). For example, in their systematic analysis of 45 case studies from manufacturing industries, Pipkin and Fuentes (2017) found that contrary to the main assumptions of the literature, developed country firms are likely to upgrade in response to shocks or market pressures, especially when their status quo is at stake.

2.3. Configurational approach

The GVC literature is rich in studies at the level of industries, regions, or countries, but it is rather limited to firm-level strategies (Agostino et al., 2015; Hansen et al., 2023; Whitfield et al., 2020).

In the field of strategy, the configurational approach to the study of firm-level behaviors and strategies is widely accepted as it attempts to group existing organizational phenomena into mutually exclusive and exhaustive categories (i.e., DeSarbo et al., 2005; Miles & Snow, 1978). These groups are typically formed on the basis of a few measurable characteristics that are significant in distinguishing one from another with a greater degree of similarity within groups and a greater degree of difference between groups (McKelvey & Aldrich, 1983).

Many organization researchers suggest that the development of configurations is an essential part of the research process (Gartner et al., 1989; McKelvey, 1975). According to Hambrick (1984), it is a fundamental cognitive tool, particularly important for the study of organizations because they consist of many dimensions which can be configured in seemingly infinite combinations. Classification, however, allows us to infer additional properties of the object under study by means of one or more key features, and thus to bring order to an otherwise complex cognitive landscape. Not only improves our understanding of the studied phenomenon, but also allows us to identify the limited conditions under which predictions are likely to hold true (McKelvey & Aldrich, 1983). Rich (1992) emphasized that it is a powerful research tool for breaking down the continuum of organizations into discrete and collective categories, enabling the detailed analysis needed for theory development.

Consequently, it is not only desirable but also expected of strategy researchers to develop classifications and configurations of real-world phenomena (Gartner et al., 1989). In fact, creating configurations is useful for any study of organizations, strategies, or behaviors at almost any level; whether at the corporate level, the business level, or at the level of the individual (Hambrick, 1984).

Configurations may be presented as typologies if they are developed theoretically, or as taxonomies if they are derived from empirical analysis (Luz Martín-Peña & Díaz-Garrido, 2008). Doty and Glick (1994) noted that typologies identify several ideal types, each representing a unique combination of the organizational characteristics on which the research focuses. However, typologies do not provide decision rules for classifying organizations. Rather, they provide an abstract model. In contrast, taxonomies are built on a set of discrete decision rules identified a posteriori through empirical work (Doty & Glick, 1994). For example, Miles and Snow (1978) viewed strategy as a series of decisions that align organizational capabilities with the firm's environment. Accordingly, companies were conceptually classified into 4 different strategic types based on their decision patterns.

McKelvey and Aldrich (1983) highlighted that numerical taxonomy methods, such as factor analysis, multidimensional scaling, and testing the resulting groups with discriminant analysis, seem the best suited for organizational classification among the many classification methods used in biology. The numerical classification methods themselves are all reasonably well developed. In the GVC literature, classifications have gained a foothold. For example, taxonomies were developed on Supply Chain strategies, GVC governance (Gereffi, 2005), and even on functional upgrading strategies (i.e., Blažek, 2016) among many others. Common in these classifications that the observations were made in relatively low degrees of environmental dynamism and volatility. This empirical study, however, aimed at identifying the emerging strategic groups in a highly uncertain and unpredictable environment.

Lamming et al. (2000) and later Harland et al. (2001) developed a taxonomy of supplier networks using a combination of interviews and telephone surveys of 50 firms. Similarly, Bensaou (1999) examined the relationship between suppliers and lead companies according to the amount of resources that each party invested. He discovered that a strong predictor of power asymmetry between two parties is the amount of investment that one is willing to make upon which four distinct types of relationship emerged. Similarly to these attempts, the present study does not attempt a quantitative taxonomy but explores the relationship between discrete strategic responses to environment-induced organizational adaptation based on a systematic analysis of interviews with senior managers of 62 firms.

Building on this, the authors seek to gain a more nuanced understanding of the strategies of SMEs participating in GVCs by directly addressing the decisions they made in seeking defensible market positions during the recent economic recession. This article examines the sequence of decisions in the way suggested by Mintzberg and Waters (1990), using direct evidence of the actions taken by the organization: if a decision is interpreted as a commitment to act, then the decision can be traced back to the action. Economic recession and inflationary pressures, combined with the already strong global competition within the GVCs and the trap of low value-added activities, are challenging the already fragile SME sector. The research also attempts to systematize adaptation strategies and thus help not only theorists but also practitioners, to understand how effective and ineffective forms of crisis-induced adaptation take place.

3. Methodology

This article takes a constructivist qualitative approach. The aim is to build a grounded theory from a practical understanding of the ways in which SME managers attempt to adapt to a highly volatile environment. Consequently, the interviews did not aim to gather opinions but to understand the experiences of those interviewed about the choices they made in finding optimal adaptation.

For the purpose of this research, the unit of analysis is B2B firms, which were established in 2004 or earlier. The firms in the sample are majority Hungarian-owned companies whose operations have stood the test of time and continue to thrive despite the global challenges of the past 20 years. The sample was selected deliberately and purposefully, based on the ownership structure, the size (having more than 15 but less than 249 employees), and the year of foundation. The present research does not aim to be representative, nor does it aim to draw conclusions about the population. Rather, it aims to extend the theory on the behavior of SMEs in times of recession, as they face increased vulnerability. In addition, the results can provide feedback on the manufacturing sector's progress toward achieving the 9th Sustainable Development Goal, which is to promote inclusive industrialization and foster innovation. Researchers hence sought to investigate the research question with as diverse a sample as possible (e.g. across industries, size, as well as owner-manager vs. senior employee) and therefore used judgmental sampling.

Data were collected through individual in-depth interviews with senior managers of the sampled companies in two consecutive rounds. The first round was in May 2022 and the second was in November 2022. The underlying reason was to collect data during the emergence of the crisis as well as during the crisis itself. Until theoretical saturation was reached, data collection continued. A total of 62 companies are included in the sample.

Prior to the interview, all participants were provided with comprehensive information regarding the interview questions, as well as the collection, anonymization, analysis, and storage of data. Participants were also asked to give verbal consent prior to the interviews, which were recorded.

The semi-structured interview questions were shared with the interviewees in advance. The Ethics Committee of the Mathias Corvinus Collegium approved the study in advance. The open-ended questions asked about specific actions that had been taken rather than opinions about specific events. The interviews lasted on average 80 minutes and were audio recorded. The anonymized transcript of the audio recordings was coded and analyzed. Data is accessible upon request.

4. Results

To analyze the qualitative data, we used Atalas.ti version 22, an advanced computer-assisted tool for systematic coding, querying, and theory building. Developing explanations of local causality was a top priority in the data analysis, as suggested by Miles et al. (2018).

The analysis followed the guidelines of discovery-oriented grounded theory (Corbin & Strauss, 2008; Denzin & Lincoln, 2011). The interviewees expressed their experiences in stories, and their narratives are quoted for the analysis to provide valuable insights into establishing causal links between events that occurred before and events that occurred after, as recommended by Tracy (2019). This means taking the reader into a story and conveying its mood through the linguistic style and narrative exposition, while at the same time connecting with the theory embedded in the narrative, as suggested by Ryan (2006).

4.1. The sample composition

In line with Stöllinger's observation that firms in low- and middle-income countries are more likely to be located in the labor-intensive and low-value-added production stage of the value chain (Stöllinger, 2021), the firms in the sample are all essentially labor-intensive, manufacturing suppliers within their respective value chain. In their study of different GVC governance structures, Demeter et al. (2006) concluded that Hungarian suppliers tend to have low bargaining power, while leading firms tend to have more control over them.

76% of the respondents have ownership in the managed firm, and 71% of the respondents manage family businesses. Consequently, 24% of the respondents (15) are employed senior executives. Out of the sample, 53% of the firms have a workforce size ranging from 15 to 50 employees, while 47% have a workforce size ranging from 51 to 249 employees. While all the studied firms are SMEs in terms of their number of employees (less than 249), however, with regards to their annual turnover there were 5 large companies with turnover exceeding the EUR 50 million threshold in 2021. The distribution of participants by industry is shown in Table 1.

Since the companies in the sample are typically in the middle of the smile curve, their core competence lies in the production and assembly of non-branded products and components. The Science and Engineering Indicators developed by the US National Science Board² claim that some industries are more R&D intense than others. In the sample shown in Table 1, the first 8 industries are considered to be medium to highly R&D intensive. For this reason, we assume that 62% of the respondents have the skills and competencies needed to engage in R&D activities and, consequently, they are capable of contributing higher value-added services and outputs, and therefore upgrading could be a feasible strategy for them.

The respondents are registered companies in Hungary. Their regional distribution shows no pattern, no region is over-represented. Finally, 26 firms were established between 1989-1994, between 1995-2000 another 15 firms were established, and the remaining 21 between 2001-2004. It is interesting to note that 44 firms started in the 'family garage', while 18 firms were founded as the 2nd venture.

4.2. The symptoms of the downturn

First, we analyzed respondents' attitudes toward the past and coming crisis based on the words they used.

The word 'difficult'³ appeared 382 times, the 'critical' 211 times but 'opportunity' and 'adaptation' much less frequently, both at 58 times each. The word difficult was found in 4 different contexts:

- as a management challenge (i.e., maintaining employee motivation and productivity);
- as an unpredictable, uncooperative, or changing customer behavior;
- as a financial difficulty or supply challenge (i.e., rising costs of production, supply shortage);
- as a difficulty to plan (i.e., uncertain environment and unpredictable market forces).

Table 1. The distribution of respondents by industry.

Industry	#N	%
Industrial design & engineering services	5	8%
Machine manufacturing	8	13%
Automotive industry	3	5%
Component manufacturing	6	10%
Chemical and pharmaceutical manufacturing	6	10%
Fabricated metal products manufacturing	2	3%
Primary metal manufacturing	4	6%
Other machinery and equipment manufacturing	4	7%
Food manufacturing	18	29%
Transportation	2	3%
Retail & distribution	4	6%

Own source.

Below are some illustrative quotes on the different contexts:

Finding a good assistant is as difficult as finding a good engineer. We're constantly struggling to hire the right people, but one position is filled another gets an opening. It's a trend today, everyone must deal with it. Some [competing companies] are poaching other's employees, which is very bad... (i13).

It's not the decision that's the most difficult to make...the real difficulty is getting that decision into the minds of our colleagues... to ensure that they are motivated to act on it. (i21)

It is terribly difficult to win a deal. Imagine we are in negotiations where the buyers say quality is the key. They are saying that it is more important than the price. Okay, I respond, here's a super good product, exactly what you need, I can offer it to you at a fair price. And the buyer acts like he's having a heart attack: Oh gosh, it's very expensive! (i9).

Costs are out of control. The crisis always causes our costs to skyrocket. But we cannot raise prices for our customers. I can't go to an MNC where we have a contract with several points and criteria and say, "I'm so sorry, but one of our suppliers has said that starting tomorrow he's going to charge 3% more for his goods. Most of these increases had to be ingested. After a while, of course, you can't do that. Financially, we just can't afford it (i16).

It was an exciting time, but compared to now, it was a very simple story. We knew, or at least suspected, where it was going to end. After accepting the losses, we started to rebuild, and we were lucky enough to be able to buy at earlier prices. And of course, we still had the money to start all over again. Now we can't see the end (i50)

These examples clearly show that the difficulty is inherent in their daily operations, though most of them are enduring challenges, that demanded managerial attention even before the crisis, such as employee turnover, reluctance to learn new skills and routines, or dealing with irrational customers.

They all cause some degree of distress and require a great deal of effort to overcome, but they appear to be less a consequence of the current war or past crises and rather explained by the evolution of the sociotechnical systems. There are three plausible explanations. First, most of the management challenges cited are an inherent part of organizational evolution, particularly the growing pains described by Greiner (1998) in his theory of organizational growth. Second, the profound changes in the means of industrial production that we are experiencing today often lead to changes in the socio-technical system that cause changes in demand and labor shortages. Third, firms' tendency to overreact after a crisis, as may occur after the COVID-19 pandemic, can also cause supply and liquidity problems. Kitchin (1923) and De Greene (1988) noted a pattern of endogenous cycles lasting 3 to 4 years, explained by fluctuations in the demand for raw materials. After recessions, firms try to catch up with their previous production levels. Demand rises until the economy realizes it has over-expanded and cuts back, probably dragging the economy into a new recession (De Groot & Franses, 2012).

The closure of COVID has been a very difficult time for us, we have been losing money every month... and I am very worried about how we are going to make up for it in the worsening economic situation. (i11).

The difficulties associated with the downturn caused by the war, however, are strategic in nature.

We are going through a very difficult period... there is the uncertainty, we absolutely don't know how much we will lose if we sign a contract today [because of rising costs of supplies] (i8).

While each participant expressed some concern about the potential negative effects of the crises, there is a distinct difference in their response strategies.

4.3. Strategies for dealing with the turmoil

In analyzing the statements about both market opportunities and adaptation strategies, it is clear that respondents are choosing to engage in activities that other direct competitors are not doing or are not doing in the same way. Two possible avenues are being pursued: one is the functional upgrading of current activities, and the other is reaching out to broader segments.

By functional upgrading, respondents described the inclusion of a broader range of mostly pre-production activities, such as the addition of product design and product development functions along with manufacturing. These companies are investing in acquiring more complex, higher value-added functions within the value chain. All cited closer collaboration with one or a few customers as a motivation for this strategy. Worthy of note is that the process of upgrading, such as improving core manufacturing capabilities (e.g., reducing lead times) by investing in technology, was not mentioned by respondents as a means of managing market uncertainty.

By serving broader segments, participants mentioned expansion into international markets. Approximately 50% of the sample (31) sell only to local companies or local subsidiaries of large multinationals. The payments between them and their B2B customers are made in Hungarian Forint. In contrast, 19 firms trade mostly in Euro (or USD) because their customers are located worldwide, and they generated less than 30% of their turnover in Hungary. An additional 12 companies reported that their international customer base is growing. In addition, those who are serving international customers are likely to have more international suppliers than domestic ones. As they recalled, they were less affected by the crisis:

In fact, the weakening of the exchange rate of the Forint offset our losses... With the price of gas going up to 800 when our contract expired, we would have been in terrible trouble. I started to panic, but luckily, we didn't end up feeling it because the Forint was weakening. (i62)

Others, however, explained how limited their room for maneuver is in the current economic environment. Some cited past failures as an excuse for their wait-and-see strategies:

At one time, about 10 years ago, we thought that the direction of growth was for us to add new services, such as assembly. But we found that with each of those things, the margin for error increased exponentially. And we realized that we were very good at manufacturing that component, and the best if we let go all the other services, and we will have less thing to worry about (i42). Similarly: Previously, I wanted to grow in new directions, but there was often a mismatch between our capacity and market needs. Then I realized that we are strong in production, and this is where we need to focus (i60).

Similarly, participants who described a proactive response strategy during the interview also cited past experiences as their motivation. For them, these attempts had previously been successful in reducing their environmental vulnerability.

We also have a strong R&D capacity. When times get tough, there's always a dilemma of whether we should cut it back because 50 engineers are a lot of money to pay, but fortunately, we've always been wise to keep it going... This turned out to be a very wise decision because despite the crisis our partners still asked us to develop their tools. The interesting thing here is that we do the development for them of the tools they use in the production of their new products. This is the best part because we make their products feasible (i54).

Some participants expressed concern about the financial burden of upgrading. They all mentioned that, despite the recession, they felt it was important to invest because it was the only way to reduce their exposure to intense competition. Responses also imply that upgrading is being accomplished gradually, in small steps, rather than as a comprehensive strategy. However, they acknowledged that implementing upgrades gradually allows them to manage costs more effectively and adapt to any unforeseen challenges that may arise during the process.

The managers in the sample, according to the interviews, do not think about how to produce a better product more efficiently or how to launch a private-label product. These companies are making the necessary year-over-year improvements, but typically not beyond that. For example, one firm that continues to produce products under major international retailer brands has begun to explore new ingredients and new flavor combinations for its customers. This is an indication that they have no intention of leaving their position as a 2nd or 3rd-tier supplier.

4.4. Typology of coping strategies

The analysis of response strategies revealed a causal model representing the archetypes of coping strategies. Four such archetypes were identified, three of which describe proactive coping strategies, while

the fourth describes a drifting, wait-and-see strategy. We compare and describe these archetypes and highlight differences in their bivariate relationships. The archetypes of strategic responses are summarized in Figure 2.

Along these two dimensions, i.e., degree of value added and degree of international customers, the following four distinct strategies emerged: Crisis Proof, Crisis Weak, Innovation Opportunity, and Market Opportunity. Each of these strategies is the result of a series of resource allocation decisions, and together these decisions determine the competitive advantage that the respective firms aim to exploit.

Most of the participants fell into the Market Opportunity group (23), while the smallest group was Crisis Proof (8), followed by Innovation Opportunity (15) and Crisis Weak (16).

The Crisis Proof strategy, as the name suggests, refers to a group of 'winners' who do not see the crisis as a disadvantage, but as a constant source of new opportunities. They not only constantly monitor trends in their environment, but also try to seize these opportunities when they arise. Their advantage is that they already have a broad and international customer base and the skills needed to perform innovative functions, which gives them the greatest room for maneuver.

The key question for us is whether we can continue to grow despite the crisis. It is about coming up with new products that will sell well in the crisis... At COVID, for example, we developed a thermometer gate to speed up access to public facilities such as schools. It filtered out people with symptoms. We even won an innovation award for it. The last 40 years have shown that we are a crisis-proof enterprise, mainly because we have always wanted to be ahead of the game. Of course, everyone is affected by the crisis to some extent, including us, but those who stay afloat will eventually grow stronger and win new markets. (i47)

This group of respondents tends to use words that express experience and determination: *'We've been there before; we've been through this before; we knew we had to keep going; we were sure there would be an opportunity'*. They were also more likely than any other group to make reference to growth:

We are talking about companies with a turnover of several billion euros, and this contrasts with a Hungarian family-owned enterprise that is trying to compete on the world market. There is a huge difference between the size of companies and their potentials, obviously, but if someone takes a look at us, he will see that we are constantly growing, and we are moving forward. (i12)

Time has proven that those who are ready to act can adapt to change and are more likely to survive. We never expected someone to come and solve the problems for us. Or tell us what to do. We have faith in ourselves to figure it out. (i2)

Our very special raw materials usually come from China and India, and well, we had learned during Covid that containerized shipping can be very slow, and airfreight can also get priced out. That's why, when the war broke out, I was already buying up supplies. Without raw materials, we would not be able to produce. (i33)

Those serving mainly local customers but with the capability to undertake higher value-added functions are in the Innovation Opportunity strategic group. The similarity between the Crisis Proof and the Innovation Opportunity strategies is that both groups are innovative organizations where innovation is

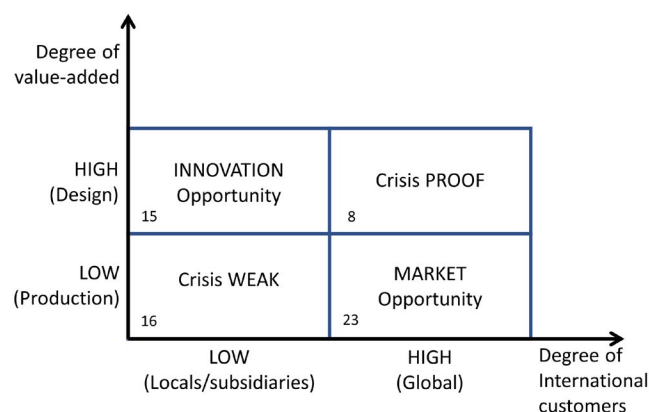


Figure 2. The crisis-response strategies.
Own source.

an institutionalized capability. Consequently, both groups are engaged in innovation, however, the innovation is usually not high-tech or radical. Rather, it is deep craftsmanship, such as the development of tools and parts needed to realize the customer's innovation.

When there is an economic crisis, we always do better. That was the case in 2008. When there's no crisis, our customers have more money and time to buy all the little things from many others. But in times of crisis, they come to us, because they know they can trust us, and we will figure out whatever they need. They usually say: I need something special; can you make it for us? (i61)

There's always something new coming out in the beauty industry, and we're always doing our best to detect it and be the first to give it a try. Even though we are a contract manufacturer, it's important for us to be able to show our customers new, innovative formulations and incorporate them into their next developments. Because when we incorporate these innovations, our customers end up selling more thanks to these new formulas which are not [yet] in their competitors' products. So that's why they choose to work with us. (i59)

What is important, is that this strategy seems not to be rooted in cost leadership strategy. The source of differentiation is the ability to meet specific needs thanks to a flexible production system. For example, some referred to their flexibility to produce between very small and very large quantities: *'There are times when our new customer asks for production of, say, 2,000 pieces, and I talk him out of it. Let's start with 500 and see if there's demand. Of course, it would be easier for me to start the machine in the morning and turn it off at night and save on transition. But that's not my long-term interest. It's better for my customer to start with a small quantity, so he doesn't have to spend a lot of money right away. If his product sells, sure, he'll come back.'* (i59).

We generally do not charge our customers for transition fees. We understand that in some cases they may only need a few specific items. Of course, this makes us look not so efficient on paper, but in the end, the customer will come back to us. (i29).

The Market Opportunity strategy refers to the group of respondents who focus on manufacturing but have a strong drive to expand internationally, that is reaching new customers in new geographies or new customers from new market segments. They have a lot of room to maneuver despite the ongoing crisis because of the diversity of their customers.

We work with a wide spectrum of steels, so we can manufacture anything from small objects to multi-ton military structures. This provides us with a high degree of flexibility because we can always find new customers not affected by the crisis. Even now, we have so many orders that we have capacity problems (i60).

We used to have Russian customers, but of course, we had to cease the business with them. Now we have customers from Argentina and New Zealand. (i57)

We generally do not charge our customers for transition fees. We understand that in some cases they may only need a few specific items. Of course, this makes us look not so efficient on paper, but in the end, the customer will come back to us. (i29).

Finally, the last group, the crisis-weak group of firms, represents those who adopt a wait-and-see strategy. These companies typically claim that environmental forces are beyond their control and therefore choose to ignore trends and continue with business as usual. This is fundamentally a poor strategy because it conserves their dependent status at the bottom of the smile curve, as they sell domestically and tend to have the lowest value-added positions. While the wait-and-see strategy does not necessarily mean the firm will go out of business, the consequence of this strategy is that they have less and less room to maneuver and break out.

The management seems to be focused on surviving the current turmoil, so building for the future is of secondary importance. It is also interesting to note that this group of respondents has a high level of self-confidence and little self-reflection. They do not question the wisdom of their past decisions that have brought the firm to its current position. They show no signs of doubting the correctness of their assessment of the environment. Nor have they talked about changing their strategy. This is evidenced by the fact that reducing the environmental dependency of the firm they run is not one of the critical tasks they openly address.

Our main problem is that we have never had an abundance of cash. Especially now, after COVID, our liquidity has been constantly weak. So waiting is our only option at the moment (i29).

In terms of language used, the similarity between the Innovation Opportunity and Market Opportunity strategies is that managers appear to be less confident than managers in the other two groups. They also tend to use more cautious language, they seem to be more speculative, and they talk about identifying opportunities more often than the other two groups.

5. Discussion

Some first-tier suppliers or those specializing in engineering activities (original design manufacturers) are usually involved early in the product specification phase and are therefore welcome by the lead firm to contribute to product innovation (Haffmans & Weele, 2004). However, the firms in the sample do not enjoy such an advantageous status. They are often positioned in the middle of the smile curve and specialize in the production of components or perform operations on materials, which means that they usually capture the least amount of value added. Nevertheless, some of them are motivated to escape their captive role and instead engage in activities that are not explicitly assigned by their customers. In particular, they are creating a competitive advantage either by entering multiple chains or by investing in functional upgrading capabilities.

In terms of upgrade trajectories, the results show that the firms don't follow the common ways of upgrade strategy. The interviews revealed that the managers in the sample do not think about how to produce better products (i.e. product upgrade) or how to produce more efficiently (i.e. process upgrade). Most companies implement the required expected annual improvements but typically do not go beyond that. However, they do follow an alternative path that requires less capital investment, even if it means that they may miss the opportunity to capture some of the additional value from the upgrade. Only their extremely dependent situation is improved, not the power imbalance within the GVC.

Previous literature suggests that an innovative supplier with unique proprietary technology and competencies close to the lead firm's core competencies can increase its bargaining power vis-à-vis its buyer and even challenge GVC governance (Bensaou, 1999; Haffmans & Weele, 2004). Moreover, serving more customers rather than a few can also help a supplier increase bargaining power and escape captivity (Pasquali et al., 2021; Sako & Zylberberg, 2019)). The common denominator in these cases is that the supplier tends to be a multinational with a global footprint, thus challenging the former unipolarity of GVC governance and, as a result, the power that was formally concentrated in the leading firm is now shared with powerful suppliers (Dallas et al., 2019).

It is noteworthy that the primary distinction from these prior studies lies in the fact that the suppliers in the present study are far smaller than those featured in earlier studies. Second, these suppliers are not at the forefront of technological progress. Instead, they are not even close to the lead firm's core competency and are modest in terms of both size and capital compared to the lead firm. Third, their ambition seems to be different too. These suppliers are not looking to move up the hierarchy and be considered a 1st-tier supplier. At least, they do not express explicitly the goal of changing their position but rather accept the position of a 2nd or 3rd-tier supplier. The perceived benefit of their strategy, whether functional or multichain, is to mitigate the risk of losing a buyer. In particular, as outlined in Table 2, the Innovation Opportunity strategy leads to the improvement of functionality. The ambition here is to increase switching costs for their buyers and make themselves difficult to replace by other rival firms. As a result, the risk of losing a buyer is reduced. However, the Market Opportunity strategy mitigates the probable loss of a buyer. Due to the firm's diverse customer base, there is sufficient resilience to compensate for a shortfall in orders if a buyer is lost.

There are other similarities between the two strategies. First, both groups explained that they were frustrated by being in a captive position. This frustration of being captive and thus vulnerable to fierce competition existed long before the recession. Nevertheless, the current and past crises seem to have acted as a very powerful external driver. They have forced the management to make a decision and to take some action.

Second, to make their operations less vulnerable, both groups referred to investments in complementary assets. These complementary assets are typically intangible assets that have the potential to either

Table 2. The comparison of the strategies to mitigate the impact of crises.

Strategy	Innovation Opportunity	Market Opportunity
#Number of firms	15	23
Ambition	Reduce the risk of losing a buyer	Reduce the loss due to losing a buyer
Means	Increasing value added	Increasing market coverage
Result in escaping captivity by	Improving functionality	Improving resilience

Own source.

increase the attractiveness of their original service or reduce the cost of customer relocation. These investments are most often directed towards the acquisition of superior market knowledge or skills, which together constitute new knowledge in the areas of production, service, and distribution and form the basis for differentiation from competitors. It is important to emphasize that the lead firm is likely to tolerate access to such new sources of knowledge because the supplier firm is not yet threatening its core competence. Rather, it helps to strengthen the complementarities between the two value chain partners, as Ambos et al. (2021) have argued.

Third, to perform technically complex tasks, suppliers also recognized that they needed to develop skills that would help them work better with their buyers. Many of them also emphasized investments in inter-organizational learning capabilities, for example, learning about the (future) needs of the supplier (i.e., gathering market information, etc., beyond what is specified in the contract). Consequently, the results suggest that they try to better manage and serve their customers. This proactive approach allows them to provide customized solutions and add value to their partnerships, ultimately ensuring a long-term relationship.

While the starting point distinguishes the two strategies (ie. functional upgrading or market diversification), the results suggest that these are not completely independent of one another. It can be expected that there will be a point at which, if one of the two paths is taken, the firms will have to seriously consider embarking on the other path as well. Ultimately, these firms are likely to build a crisis-proof strategy, and therefore their current position only shows that they are at the beginning of their journey. This observation is very much in line with the findings of Pasquali et al. (2021), who present evidence that multi-chain suppliers often engage in product sophistication. Consequently, these alternative strategies follow two routes which are gently ascending in a serpentine path toward the top, avoiding the formidable obstacle of steep inclines, analogous to the two sides of the smile curve.

In summary, these findings indicate that both strategies will lead to upgrading, where upgrading is implemented gradually and in small steps, enabling the firm to seize the opportunities that present themselves. This is a new perspective that goes beyond what could be expected from the literature. These companies can stay competitive despite any crisis and reduce either the likelihood or the potential impact of losing a customer. It suggests that the winning strategy is less about how to be smarter than about how to strategize smarter.

The results confirm that despite the power asymmetries in the GVCs, the view of underperforming local firms with outdated technology is not entirely accurate (Chikán et al., 2018), and proactive firms can change their destiny. Nevertheless, the fundamental goal of upgrading is less grandiose than trying to outcompete the lead firm. Rather, it is to make the firm indispensable in the GVC and thus reduce its vulnerability to industry forces, and the ambition to capture more of the profits seems secondary.

Last but not least, with regards to firms choosing not to have an adaptation strategy is explained by former research. Based on the interviews, however, we believe that the unlearning ability is weak in such firms. The literature noted that the inactivation of outdated knowledge, the so-called unlearning, is crucial for the elimination of inefficient behavior in favor of new, adaptive behavior (Turc & Baumard, 2007). Changing realities make some of the perceived validity of organizational knowledge obsolete, so managers need to understand that they must discard obsolete knowledge in order to acquire new knowledge (Becker, 2005; Hedberg, 1981). Moreover, when firms respond to the pressure to change with a wait-and-see posture, it may work in the short run, but the general observation is that firms are likely to underperform in the long run because they are unable to learn (Kim, 1998).

6. Conclusions and limitations

First, it demonstrates that economic recessions generate circumstances that enforce strategy-making. The firms that strive to maintain control of their leeway will be proactive in seeking market opportunities that reduce their exposure to the downturn. Second, once a firm is out of its comfort zone, upgrading is not only feasible but also a viable strategy. Even though the upgrading is achieved in small, incremental steps, the firms can effectively mitigate the risks of losing out in the GVC, which also enables them to move out of the captive supplier position. While outside the scope of the present study, the findings imply that firms become more valued partners within the GVC. Third, contrary to what the literature suggests, product development and process improvements, which are often suggested as the starting points, are not the upgrading strategies followed. The firms started with the accumulation of new but complementary knowledge that contributes to better serving or serving more customers, but both strategies seem to work best together in the long run, and eventually, the firm may choose to pursue both strategies concurrently. Lastly, the study emphasizes the idea that strategies evolve rather than being planned. However, they are not driven by mere faith. The adage ‘fortune favors the prepared’ applies here too. Consequently, it is less a question of how to be smarter as a firm, but rather how to have a smarter strategy.

The research that is being presented has several limitations. First off, the conclusions that can be drawn from the results are limited. On the one hand, this qualitative study was limited to interviews, observations, and analysis of implemented strategic archetypes; therefore, the results of the research are naturally limited in their interpretability. It is up to follow-up research to explore the correlation between upgrading strategy and firm performance. Secondly, there can be sector-specific variations that are not examined in the current study. Depending on whether the upgrade method is used, some industries may be less negatively or favorably affected by the crisis, allowing their businesses to perform better. Thirdly, the degree of product specificity and complexity is also unexplored; thus, follow-up research can investigate whether there is a causality between the choice of upgrading strategy and product complexity.

By addressing the question, ‘What potential development paths can B2B SMEs undertake to enhance their competitiveness or secure a more defensible market position within a highly volatile and uncertain macroeconomic context?’ The article reveals critical implications for both policymakers and business practitioners.

For policymakers, the insights provided offer a robust framework for designing targeted support programs. By distinguishing between ‘proactive, adaptive firms’ and ‘wait-and-see’ firms, policymakers can craft initiatives that foster proactive behavior. This could include offering tax incentives or subsidies to companies that invest in capability upgrades or diversify their supply chains. Additionally, promoting knowledge transfer and sharing best practices among SMEs can cultivate a more resilient business ecosystem, ensuring that firms are better equipped to navigate economic uncertainties.

From a managerial perspective, the article’s findings empower practitioners with a nuanced understanding of various strategic patterns. This knowledge enables B2B SMEs to make informed decisions by benchmarking their current strategies against successful peers. By comprehending the spectrum of adaptation strategies and their outcomes, firms can reduce uncertainty, identify and replicate effective strategies from similar market segments, and adopt a more focused approach to enhancing competitiveness and securing a defensible market position.

Notes

1. The distribution of value chain benefits is typically examined along two dimensions: the individual functions (horizontal axis), such as purchasing, production, and logistics, and the level of value added per unit of output from each function (vertical axis).
2. <https://nces.nsf.gov/pubs/nsb20205/production-patterns-and-trends-of-knowledge-and-technology-intensive-industries>
3. including synonyms.

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Data availability statement

The data are not publicly available due to restrictions implemented to protect the anonymity of research participants. The data supporting the conclusions of this study can be obtained by contacting the corresponding author.

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