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Local-First, Global-Second: Implementing Glocal Dual Sourcing for Supply-Chain Resilience

An Exploratory Case of a Swiss Pump Manufacturer

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ABSTRACT:

Global shocks—from pandemics to geopolitics—have exposed the fragility of cost-driven global sourcing. This study asks how manufacturing firms can implement a "glocal" dual-sourcing strategy that simultaneously preserves cost competitiveness and strengthens supply-chain resilience. Adopting an interpretivist, exploratory case design, we investigated a Swiss multinational that manufactures industrial pumps and vacuum systems. Six semi-structured interviews with the purchasing director, two global purchasers and three sourcing buyers provided the core data set, which was analysed thematically.

Findings show that cost reduction remains the primary trigger for dual sourcing, but local suppliers become indispensable shock absorbers when global flows are disrupted. The firm follows a distinctive "local-first, global-second" sequence: collaborate with proximate suppliers during product development to fix design and gain internal buy-in, then add low-cost foreign suppliers for volume production. Regional purchasing hubs in China and India bridge cultural and quality gaps, while selective application—focusing on high-value or long-qualification items identified via the Kraljic matrix—keeps complexity manageable.

The study contributes a directional perspective to dual-sourcing theory and offers managers a pragmatic roadmap for balancing efficiency and resilience under VUCA conditions.

KEYWORDS: sourcing, glocal sourcing, manufacturing firm, resilience, supply chain, global and local, sourcing implementation

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1 Introduction

Over the past four decades the increasing technical complexity of products, together with rapid advances in transportation and digital communication, has transformed the purchasing and supply networks of firms (Gadde & Wynstra, 2017). What began as an experiment by multinational manufacturers in search of lower input costs soon became a routine option for small and medium-sized enterprises, each orchestrating global webs of suppliers to secure price, quality, technology and speed (Kotabe & Murray, 2004).

The logic was compelling. By spreading production lines across countries, components for a single product could be made wherever comparative advantage was greatest, then stitched together through ever faster logistics and information flows (Christopher & Holweg, 2011; Trent & Monczka, 2003). Optimising such extended chains therefore promised a durable competitive edge and dominated operations thinking for much of the pre-pandemic era (Monczka et al., 2009).

Yet the same scope that delivers efficiency can magnify fragility. When a container vessel wedged itself across the Suez Canal, when COVID-19 emptied Chinese ports, when war returned to continental Europe, firms that had perfected single-source, lowest-cost playbooks discovered how quickly a missing gasket or chip can halt an entire assembly line (Ivanov, 2020; Craighead et al., 2020; Meyer & Li, 2022). Major disruptions—geopolitical, sanitary, climatic—are not aberrations but a recurring feature of contemporary commerce (Sheffi, 2005; Taleb, 2007). The pressing question has become how global sourcing can be adapted so that the flow of goods is secured at acceptable cost, quality and lead time even when shocks strike.

Well before COVID-19, scholars had begun to map the evolution of global supply-chain risk (Colicchia et al., 2010) and to examine how procurement could shape resilience (Lago Da Silva et al., 2014). Early post-pandemic studies confirm that chains endowed with prior innovation capacity coped better (Orlando et al., 2021) and that sourcing choices such as just-in-time or relational contracting influenced disruption impact (Cajal-Grossi et al., 2023). What remains thin, however, is empirical insight into whether global sourcing itself can be redesigned to buffer, rather than amplify, shocks.

The debate is often framed as a binary choice between overseas and domestic suppliers (Hoek & Dobrzykowski, 2021; Wang & Sun, 2020). While recent surveys report a swing toward nearby sources and shorter lead times (Koerber & Schiele, 2021), a wholesale retreat from international partners is rarely feasible: overseas plants may hold unique process know-how or proprietary tooling that cannot simply be replicated at home (Wu & Zhang, 2014). An alternative now gaining attention is the so-called "glocal" arrangement, in which a proximate supplier offers responsiveness while a distant low-cost partner preserves price advantage. Analytical models suggest that such dual sourcing can tame disruption risk without the coordination overload of full multiple sourcing (Yu et al., 2009; Su & Liu, 2014; Tomlin, 2006), yet they often idealise suppliers as interchangeable nodes chosen simultaneously and thus overlook the lived reality of qualifying, sequencing and governing the local–global pair.

This thesis addresses that gap by tracing how a Swiss manufacturer of industrial pumps and vacuum systems set out to make its global sourcing more shock-proof without giving up hard-won cost advantages. Through six in-depth interviews with purchasing managers and an analysis of internal procurement documents, the study reconstructs the decisions, hurdles and work-arounds that shaped the company's shift toward what practitioners describe as a "local-first, global-second" choreography of suppliers. In doing so, the narrative moves the discussion beyond abstract prescriptions—add inventory, diversify suppliers—toward an understanding of how purchasing professionals navigate the tension between efficiency and robustness.

The paper is organised as follows. **Chapter 2** reviews the literature on sourcing strategies, supply-chain risk and resilience and develops the conceptual lens that frames the inquiry. **Chapter 3** sets out the interpretivist single-case methodology. **Chapter 4** presents the findings from the Swiss pump manufacturer, tracing how purchasing managers choreograph a local-first, global-second supply base. **Chapter 5** connects those findings to wider debates, highlighting theoretical contributions and managerial implications. **Chapter 6** distils the study's key insights, acknowledges its limitations and sketches directions for future research.

2 Literature Review

In this section, the relevent literature and studies conducted on strategic sourcing, resilence, and supply chain disruptions are presented.

2.1 Sourcing role and strategies

2.1.1 Sourcing definition and role

Strategic sourcing, or supply chain management, is defined by Monczka et al. (2009) as the strategic processes behind obtaining the required goods or services for a company to operate. It includes identifying, selecting, evaluating, managing and developing suppliers in order to acquire these goods or services at the best price, with the best quality, in the right quantity and in the best delay possible. The department in the organization responsible for the activities ensuring such feats is the purchasing department.

Strategic sourcing is a subject of interest in the literature as it is a key component of the purchasing performance of firms, and therefore is a key component of the corporate success of firms (Giunipero et al., 2019). The importance of strategic sourcing becomes even clearer when we put into perspective the importance of the current share of purchasing for manufacturing companies. Nowadays, an industrial company spends in average 60% of its turnover on the supplies, and savings in purchasing, by reducing the purchasing costs, is typically twice as efficient on the firm return on assets than an increase in the sale volume (Schiele, 2019). This explains the initial incentive for firms to source from foreign locations with lower production cost (Kotabe & Murray, 2018). However recent global disruptions gave importance toward the securitization of the supplies (Holgado & Niess, 2023). There is a need for firms to find a balance between cost and resilience of their supply sources. Academic literature already showcased the importance and the role of purchasing and supply management, and therefore of strategic sourcing, when it comes to supply chain resilience (Chiang et al., 2012; Pereira et al., 2020; Pereira et al., 2014).

However, supply chain management or strategic sourcing involves multiple functions within the organization (Monczka et al., 2009; Schiele, 2019). Purchasing therefore needs to work closely with the quality department, manufacturing, the procurement department, the R&D department or even the finance department. In this sense, the purchasing department acts as an interface between external stakeholders, like the suppliers, and the firm, but also as an interface between the others internal functions which have been previously stated (Dubois & Wynstra, 2005). For a successful strategic sourcing, there is firstly a need for an internal integration, which means proper communication flows and linkages between the different functions of the company in order to solve problems and work toward a common and jointly defined goal (Monczka et al., 2009, pp. 111–152, Chapter 4). For instance, the supply management must work closely with the quality department to ensure that the suppliers are performing as they should, or with the R&D/engineering department to find suppliers meeting the technical requirements. And on the other hand, as the supply management represent the organization for the external stakeholders, there is a need for external integration, especially with the suppliers. The supply management, and particularly the purchasing department, are the main communication link with the suppliers as they have the responsibility to select the suppliers, to negotiate the conditions of the purchase, and to handle any potential issue, with sometimes the support of other departments (Monczka et al., 2009, pp. 111–152, Chapter 4). External integration of this kind can take the form of open communication of information on production schedules, price list and price evolution, forecasts of purchased items, or a commitment to product quality from the supplier. Monczka et al. (2009, pp. 123, Chapter 4) list these advantages of a closer buyer-seller relationship in opposition with the traditional approach, and the nature of the buyer-supplier relationship is the responsibility of the supply management, and in particular of the purchasing department.

Transactional or tactical sourcing issues that the supply management must deal with imply the profiling by commodity of the items being sourced, then the definition of the source selection criteria for this commodity (Giunipero et al., 2019). Obviously when selecting suppliers, several criteria are to be considered. The primary criteria are the price,

the quality, and the delay specific to each supplier. Other criteria are also being considered by firms such as management structure, financial performance, cost structure, environmental imprint, or depending on the product being sourced, technological capabilities (Monczka et al., 2009, pp. 248-250, Chapter 7). After identifying suppliers, the second aspect of sourcing management is the definition of the sourcing strategies, in line with the corporate strategy, and the requirement of the commodity being sourced (Monczka et al., 2009, pp. 243, Chapter 7). This corresponds to selecting which suppliers of the supply base firms will place orders and how (Burke et al., 2007). There is a first choice that needs to be made regarding whether to source locally or internationally, as local sourcing and global or foreign sourcing each has their advantages and disadvantages that this paper will elaborate on in the following parts of the literature review. The second aspect deals with the tactical nature of the sourcing strategies as firms need to identify for each commodity, or even at item level, if it must be sourced from a single supplier, or from multiple suppliers (Monczka et al., 2009, p. 244, Chapter 7).

2.1.2 Definition of Single/Multiple sourcing and dual sourcing

Single sourcing refers to a sourcing strategy where a firm relies on one supplier for a particular product, or sometime even a whole commodity. Research shows that many firms had shifted towards single sourcing to consolidate their supplier base, thereby benefiting from economy of scale, reduced order lead times, and lower logistical costs (Burke et al., 2007). These advantages come from the ability to negotiate better terms with a single supplier, while establishing closer relationships, which in turn leads to improved performance. One of the other rationales behind single sourcing is the fact that it allows the firms to streamline and optimize their supply base (Monczka et al., 2009), which can firstly reduce the total product cost and the supply base administrative costs, but also lower the supply base Risk. Indeed, the supply risk does not only consist of supply disruption, according to Monczka et al., (2009), poor quality, poor delivery and poor pricing are also parts of the supply base risks and having a few carefully selected suppliers can reduce the probability of such supply risks. However, the success of single sourcing relies

on the development of trust and strong partnerships between the buyer and supplier which can be difficult to achieve (Burke et al., 2007). Moreover, a single sourcing situation can create an unhealthy dependency where one side may become overly reliant on the other, whether it is the supplier being financially dependent on the large volume ordered by the purchasing organization, or the buying firm being dependent on a single supplier due to the fact that it is the only qualified source for one of its critical item (Burke et al., 2007, p. 319). This also explains why single sourcing, especially from a single location, is a strategy vulnerable to supply disruption, making relying on a single supplier, especially for critical items, a risky option (AlvaradoVargas & Kelley, 2020; Monczka et al., 2009; Pochard, 2003). If a supplier does not have multiple facilities in multiple locations, a disruption affecting its production capacity will result in a supply disruption due to the delay or the unavailability of the item produced by the affected supplier. This will hinder the operational activity of the buying firm and will affect the quality of service for its customers if it cannot deliver its final product.

Multiple sourcing, on the other hand, involves procuring goods or services from several suppliers. Studies suggest that in situations where supply price uncertainty and lead-time variability are high, using multiple sources reduces risks and increases flexibility (Burke et al., 2007; Lago Da Silva et al., 2014 ; Namdar et al., 2017). This approach minimizes the risk of stockouts and helps firms manage unpredictable supply chains more effectively by splitting orders (Burke et al., 2007). Furthermore, research shows that diversification among suppliers can yield cost benefits when lead times are uncertain or when the firm is risk-averse, highlighting the flexibility and safety that multiple sourcing can provide in dynamic market conditions (Burke et al., 2007; Namdar et al., 2017). These advantages come, however, with counterparts. Multiple sourcing increases the complexity of the supply chain by adding horizontal complexity (number of suppliers) and spatial complexity (distance between the buying firm and its suppliers) as firms must manage relationships with several suppliers, each with their own production schedules, quality standards, geographical constraints and logistics processes (Bode & Wagner, 2015). Increases in redundancies, which can be seen as a strategy to foster resilience, increase the complexity of the supply chain and therefore create uncertainties and

vulnerability points in the supply chain (Pochard, 2003). In addition, the administrative burden grows due to the need for more coordination, communication, and monitoring of multiple contracts. This can lead to higher transactional and operational costs, potentially offsetting the cost benefits of supplier diversification (Monczka et al., 2009).

Dual sourcing—a streamlined variant of multiple sourcing in which a firm deliberately splits its requirements between exactly two suppliers—forms the analytic core of this thesis. Its attraction is one of "just-enough" redundancy: by adding a single alternative source, the buyer escapes the hazard of total dependence yet avoids the coordination burden that often accompanies full multiple sourcing (Burke et al., 2007). Modelling studies confirm that a carefully designed local–global dyad can buffer both routine operational volatility and low-frequency disruption shocks more efficiently than single- or many-supplier portfolios (Su & Liu, 2014). Practitioner interest in that middle-way option has surged since COVID-19, because it promises resilience without forcing a wholesale retreat from the cost advantages of global sourcing (Koerber & Schiele, 2021; Holgado & Niess, 2023; Wang & Sun, 2021).

Most scholarly work on dual sourcing, however, remains analytically driven. Su and Liu (2014) show that its value depends on whether the two suppliers' disruption risks are positively or negatively correlated. Co ,Henry C et al. (2012) derive a hybrid continuous-review model for firms juggling a low-cost, long-lead-time offshore supplier with a faster but more expensive domestic partner. Earlier, Yu, Zeng and Zhao (2009) compared single versus dual sourcing under varying disruption probabilities, price differentials and reliabilities. Such decision-models illuminate when dual sourcing makes economic sense, but they treat implementation as an abstract parameter inside the algorithm.

What remains under-explored is how manufacturing firms sequence, govern and evaluate a local-global supplier dyad in practice. Empirical evidence is scant, and the few field studies that do exist still focus on narrowly defined tactics (e.g., Just In Time versus relational sourcing: Cajal-Grossi et al., 2023). This thesis therefore tackles an unresolved question: How can a glocal dual-sourcing strategy be implemented so that it strengthens supply-chain resilience without eroding cost competitiveness? By tracing the roll-out of such a strategy at a European industrial-pump manufacturer, the study complements the

predominantly modelling-based literature and clarifies the concrete benefits, trade-offs and managerial challenges involved.

2.2 Geography-based sourcing strategies: local, continental, trans-continental and *glocal*

Sourcing choices can be plotted along a geographic continuum that runs from the factory gate to the far side of the globe, each position offering a distinct mix of cost, responsiveness and risk.

Local (domestic) sourcing secures inputs from suppliers in the firm's own country or close region. Short lead times, shared institutions and cultural proximity make the chain highly responsive—an advantage that becomes critical when global lanes stall (Bastas & Garza-Reyes, 2022; Belhadi et al., 2021). Its chief drawback is higher factor cost, which can erode price competitiveness unless offset by flexibility or sustainability gains (Wu & Zhang, 2014).

Continental (intra-regional) sourcing stretches the radius but keeps suppliers on the same economic land-mass—e.g., European buyers choosing Central-European partners. Roughly half of European firms' external spend now sits in this "middle-distance" bracket (Bengtsson et al., 2009), and interest has climbed after COVID-19 as companies look for proximity without forfeiting scale (Koerber & Schiele, 2021).

Trans-continental (global) sourcing coordinates common items, technologies and suppliers across business units worldwide (Monczka & Trent, 1991). When executed strategically—i.e., not as ad-hoc international purchasing but as a cross-functional programme—global sourcing can unlock cost, quality and technology advantages (Petersen et al., 2000; Kotabe & Murray, 2004). Yet the same lean, long networks magnify fragility: a blocked canal, a border closure or a pandemic lockdown can paralyse flow and inflate true landed cost (Holweg et al., 2011).

Firms pursue each geographic option through outsourcing (independent suppliers) or, where scale permits, intrafirm sourcing (internal subsidiaries), the latter conferring tighter control but accessible only to multinationals (Kotabe & Murray, 2004).

Positioned at the intersection of those options is glocal sourcing—a hybrid that links at least one proximate supplier with at least one distant, lower-cost counterpart. The term draws on Svensson's (2001) notion of glocal strategy—global reach tempered by local adaptation—but adapts it to procurement. Here the "adaptation" is not product localisation; it is redundancy in geography: cost efficiency and scale are captured through the remote source, while rapid response and contextual certainty are secured through the local or regional partner.

Academic treatment of glocal sourcing is still sparse. Most quantitative work embeds the idea implicitly under the label dual sourcing, modelling one cheap-but-risky supplier and one costly-but-reliable supplier (Su & Liu, 2014; Co ,Henry C et al., 2012; Yu, Zeng & Zhao, 2009). That stylised assumption is often violated in practice: technology, quality certification or currency swings can make the nearby source the more expensive and more risky party, or vice-versa. Only a handful of field papers probe such realities. Grandinetti and Tabacco (2015) show how spatial proximity fosters collaboration and innovation when complex, customised components are involved, but they do not examine disruption exposure. Koerber and Schiele (2021) document a post-COVID drift toward "continental plus trans-continental" supplier portfolios, yet provide little detail on governance or performance outcomes.

Consequently, we still lack empirical insight into how manufacturers implement a glocal dual-sourcing set-up, what everyday challenges arise and whether the promised resilience materialises in practice. Addressing that gap—by tracing the roll-out of a local-plus-global dyad at a European industrial-pump maker—is the central purpose of the present thesis and the focus of the chapters that follow.

2.3 VUCA World

In today's rapidly changing global environment, organizations operate within what is often referred to as a VUCA world. It is characterized by Volatility, Uncertainty, Complexity, and Ambiguity (Bennett & Lemoine, 2014). Originating from military terminology, the VUCA concept has been adopted in management and supply chain literature to describe the challenging conditions under which modern supply chains must function. Volatility refers to the speed and turbulence of change. It can be rapid fluctuations in demand, supply availability, or market conditions within supply chains. Uncertainty denotes the lack of predictability and the inability to foresee future events. According to Bennett & Lemoine (2014), global supply chains may face uncertainty from unpredictable geopolitical events, regulatory changes, and emerging market trends. Complexity involves the multitude of forces and factors that complicate decision-making. Since supply chains are networks with numerous interconnected entities, technologies, and processes, they are vulnerable to disruptions at multiple points. Finally ambiguity refers to the potential for misinterpretation which arises from unclear information, cultural differences, or conflicting signals.

2.3.1 Disruption types

Understanding the VUCA framework is mandatory for organizations aiming to enhance supply chain resilience. To navigate the global environment, firms now need agility, adaptability, and risk management strategies (Christopher & Holweg, 2011). In this context, there is a need to examine the various types of disruptions that can affect global supply chains. Disruptions can be categorized based on their source, nature, frequency, impact, geographical scope, and duration.

Firstly, from a source-based perspective, disruptions may arise from natural disasters such as earthquakes, floods, hurricanes, and pandemics, which can damage infrastructure and disrupt logistics (Kleindorfer & Saad, 2005). Then man-made disasters, which can include for instance industrial accidents, fires, explosions, or hazardous material

spills, will affect production or transportation. Economic disruptions like financial crises, currency fluctuations, or trade wars affect supply chain costs and operations (Heckmann et al., 2015). Political and geopolitical risks such as government instability, regulatory changes, sanctions, embargoes, or terrorism, impact global trade routes and supply chain networks (Manuj & Mentzer, 2008). Technological disruptions, including cyber-attacks, data breaches, system failures, or rapid technological changes, affect information flows and operational capabilities (Tang & Musa, 2011). Finally, social risks such as labor strikes, workforce shortages, pandemics affecting workforce health, or shifts in consumer behavior influence supply and demand dynamics.

When it comes to the nature of disruption, operational risks involve internal process failures like equipment malfunctions, quality control issues, or capacity constraints (Chopra & Sodhi, 2004). Supply risks originate from suppliers and include delays, poor performance, or problematic financial situation (Monczka et al., 2009). Demand risks refers to unpredictable changes in customer demand which can lead to inventory imbalances or service level challenges. Additionnaly, environmental risks involve compliance with environmental regulations, sustainability concerns, or natural resource scarcity which can affect firms operations (Chopra & Sodhi, 2004).

Disruptions can also be classified based on their frequency and impact. High-impact, low-frequency (HILF) events are rare occurrences that have significant consequences when they happen, such as major natural disasters, global pandemics, or significant geopolitical conflicts (Macdonald & Corsi, 2013; Namdar et al., 2017). Due to their low probability, these events are often overlooked in risk assessments, but their high impact can cause important operational and financial damage. On the other hand, low-impact, high-frequency (LIHF) events occur more regularly but have a smaller individual impact on the supply chain. Examples include minor supplier delays, small-scale equipment failures, and routine transportation issues (Namdar et al., 2017; Zsidisin & Wagner, 2010). While each event may not significantly disrupt the operations, however if they are not properly handled their cumulative effects can degrade supply chain performance over time.

The geographical scope of a disruption also influences its impact on supply chains. Local disruptions affect a single facility or localized area and can often be managed with contingency plans and local resources. Regional disruptions impact a broader area, potentially affecting multiple facilities or suppliers within a specific region, such as regional natural disasters or political unrest. Global disruptions have worldwide implications, affecting supply chains across multiple countries and continents. The COVID-19 pandemic is a prime example of a global disruption, exposing vulnerabilities in global supply chains and emphasizing the need for enhanced resilience and flexibility (Ivanov, 2020).

A special category within the HILF events is the concept of Black Swan events, introduced by Taleb (2007). These are highly improbable and unpredictable incidents that have severe and widespread consequences. Black Swan events are characterized by their rarity, as they are extreme outliers beyond the realm of regular expectations; their severe impact, causing significant disruption and profound effects on operations and markets; and their retrospective predictability, where, after the event occurs, explanations and rationalizations make it appear predictable in hindsight. Examples of Black Swan events affecting global supply chains include the 2008 global financial crisis and the COVID-19 pandemic. These events have underscored the importance of preparing for the unexpected and highlighted the need for flexibility and adaptability in supply chain management (Craighead et al., 2020).

In a VUCA world, supply chains must be designed not only for efficiency but also for resilience. This involves a shift from cost-centric models to those that balance cost with risk management and agility (Christopher & Peck, 2004). By recognizing the types of disruptions that can occur and understanding their potential impact, organizations can better prepare for and mitigate the risks inherent in global supply chains.

2.3.2 Disruptions and manufacturing firms

Manufacturing firms are particularly susceptible to supply chain disruptions due to their heavy reliance on the timely and consistent flow of physical inputs and materials necessary for production (Hendricks & Singhal, 2005). Disruptions affect manufacturing firms in multifaceted ways, impacting operational efficiency, financial performance, and strategic planning. Unlike service providers, whose outputs are often intangible and less dependent on complex logistics networks, manufacturing operations are intricately linked to their supply chains. Disruptions in the supply of raw materials, components, or subassemblies can halt production lines entirely, leading to significant operational and financial losses (Tang & Tomlin, 2008). Additionally, the widespread adoption of lean manufacturing practices and Just-in-Time (JIT) inventory systems has minimized buffer stocks in manufacturing firms, thereby increasing their vulnerability to any interruptions in supply (Christopher & Peck, 2004). The complexity and globalization of manufacturing supply chains, involving multiple tiers of suppliers across various geographical locations, further exacerbate this vulnerability (Choi & Hong, 2002). In contrast, service providers often have greater flexibility and less dependence on physical goods, allowing them to adapt more readily to disruptions. Therefore, manufacturing firms face unique challenges in managing supply chain risks, necessitating strategies to enhance resilience and maintain continuity of operations.

Covid-19 has been one of the biggest disruptive challenges for firms, especially in the manufacturing sector. Due to the specific nature of the epidemy, governments had to take measures such as travel restrictions, and mandatory lockdown leading to temporary shutdowns of factories in order to stop its spreading (Xu et al., 2020). The COVID-19 pandemic had a significant impact on the manufacturing sector in the Euro Area. In March and April 2020, the Manufacturing PMI dropped sharply, with the index falling by an unprecedented 14.8 points in France and Germany, reaching 33.7. For the broader Eurozone, the PMI fell to 33.6 during the same period (CEIC Data). The impact of COVID-19 has been further investigated by Cai and Juo in their 2020 study intitled Influence of COVID-19 on Manufacturing Industry and Corresponding Countermeasures from Supply Chain Perspective. Production interruption combined with a fluctuating and uncertain

demand, as well as logistic incapability to satisfy this demand caused major economical drawbacks on the manufacturing sector. They identified two phases, the first phase relating the lockdown of the manufacturing center that is China, and the second phase dealing with the epidemy spreading globally, which affected the global production, but also the market demand, and the global logistic system. The other impact of the COVID-19 disruption is on manufacturing firm sourcing strategies, and how they had to potentially adapt them. According to Cai and Juo (2020) on of the major axe of development for manufacturing sourcing strategies is a switch from global sourcing to regional sourcing. The regionalization trend has been a continuous discussion topic, especially in developed countries, due to anti-globalization populism and increased cost in developing countries. The COVID-19 crisis, and prior to it, the trade war between the U.S. and China further emphasized this debate (Wang & Sun, 2021). Despite all that, it seems like the COVID-19 crisis does not represent a turning point in global sourcing strategies (Koerber and Schiele, 2021). On the contrary, transcontinental sourcing is bound to remain important, or even slightly increase in the near future according to the interviewed companies by Koerber and Schiele. Major disruptions like COVID-19, and the global business context in which global sourcing, and especially transcontinental sourcing will tend to keep increasing explain the need for manufacturing companies to achieve resilience for their global supply chain.

2.3.3 Disruptions and global sourcing risk on supply chains

Global sourcing offers firms lower costs, access to new markets and a broader supplier base, yet those very advantages enlarge their exposure to shocks (Trent & Monczka, 2003). Recent work argues that major disruptions have become the rule rather than the exception for globally integrated businesses (Grossman, Gindre & Haering, 2023) and now occupy centre stage for both scholars and practitioners (Patel, 2023). Meyer and Li (2022) group these shocks into three overlapping barriers: restrictions on cross-border mobility, diverging national regulations and a rising tide of anti-globalisation populism—each global in reach and uncertain in duration.

One familiar amplification mechanism is the bullwhip effect, the tendency for demand variability to grow as orders move upstream (Lee, Padmanabhan & Whang, 1997). Long lead times and dispersed supply networks worsen that distortion. When a shock strikes—say, a sudden swing in consumer demand—retailers often over-adjust their orders; the reaction spreads to wholesalers and manufacturers, who see exaggerated demand signals (Chen & Lee, 2012). The outcome is costly: excess stock, stock-outs or unplanned production runs.

Long international chains intensify the bullwhip because information travels slowly and opaquely across borders (Holweg et al., 2005). Time-zone gaps, language and cultural differences further hamper accurate communication (Kull et al., 2014). The sheer complexity of coordinating forecasts across several countries compounds the challenge (Geary, Disney & Towill, 2006). In a disruption, these weaknesses become acute as managers struggle to obtain timely, reliable data.

A second hazard is capacity constraint at distant suppliers. Natural disasters, political unrest or health crises can close plants, deplete labour pools or block logistics routes (Ivanov, 2020). The COVID-19 pandemic combined all three: lockdowns shut factories in key sourcing nations, travel bans froze cross-border supervision and inconsistent health protocols fractured previously seamless flows (Shih, 2020; Meyer & Li, 2022).

When suppliers already run near full capacity, even a brief stoppage leaves no slack to meet a rebound in demand (Sodhi & Tang, 2012). If a buyer relies on a single offshore source, switching production quickly is rarely an option (Sheffi, 2005). Dependence on a handful of suppliers therefore magnifies vulnerability when the primary source fails (Tang, 2006). Early evidence suggests many multinationals now respond by blending their global networks with nearer-to-home partners—often in the form of dual-sourcing portfolios—to hedge against future shocks (Koerber & Schiele, 2021).

2.4 Resilience

2.4.1 Definition

Resilience is a multifaceted concept explored across various disciplines such as ecology, psychology, engineering, and organizational studies. At its core, resilience refers to the ability of a system, entity, or individual to withstand, adapt to, and recover from disruptions or adverse events (Holling, 1973; Sutcliffe & Vogus, 2007).

In ecology, Holling (1973) defined resilience as the capacity of an ecosystem to absorb disturbances and reorganize while undergoing change, retaining essentially the same function, structure, and feedbacks. This perspective emphasizes adaptability and the ability to persist in the face of external shocks.

In psychology, resilience pertains to an individual's capacity to cope with stress and adversity, bouncing back from difficult experiences (Luthar et al., 2000). It involves processes of adaptation and recovery that enable people to maintain or regain mental health despite hardship.

Engineering resilience focuses on the ability of materials or structures to return to their original state after deformation or disruption. This notion emphasizes robustness and the speed of recovery, focusing on the system's efficiency in returning to equilibrium after a disturbance (Bruneau et al., 2003).

Organizational resilience extends these concepts to businesses and institutions and refer to the capability of organizations to anticipate, prepare for, and respond to incremental changes or sudden disruptions in order to survive and prosper (Starr et al., 2003). This involves not only recovering from unexpected events but also learning from them to improve future responses.

2.4.2 Supply chain resilience

Supply-chain resilience is “the adaptive capability of a supply chain to prepare for, respond to and recover from disruptions in a timely and cost-effective manner” (Tukamuhabwa et al., 2015, p. 8). Four interrelated capabilities underpin this adaptability—agility, flexibility, collaboration, and redundancy—and must be considered together to avoid risk migration.

Agility is the speed with which a supply chain detects disturbances and adjusts flows. Digital technologies such as IoT sensors, end-to-end visibility platforms and blockchain ledgers shorten information latency, allowing managers to trigger corrective actions before a local disturbance becomes system-wide (Ivanov & Dolgui, 2020). Predictive analytics and simulation further enhance agility by testing response options ex ante (Blackhurst et al., 2011).

Flexibility refers to the structural and contractual freedom to re-route resources when conditions change. Reconfigurable production cells, multi-modal transport networks and postponement strategies—delaying final product configuration until demand is known—create real options that absorb forecast error rather than amplify it (Yang & Yang, 2010). Flexible volume clauses or price-adjustment mechanisms in supplier contracts serve the same purpose in the commercial domain (Tang & Tomlin, 2008).

Technical options yield little benefit unless partners coordinate their use. Long-term relationships, shared contingency plans and joint planning routines build the trust needed to exchange sensitive data and to execute rapid, system-wide adjustments (Wieland & Wallenburg, 2013). Embedding these routines in a risk-aware culture—regular risk reviews, scenario drills and post-event learning sessions—makes collaborative responses habitual rather than ad hoc (Jüttner & Maklan, 2011).

Redundancy provides physical and relational buffers against single-point failures. Inventory safety stock cushions short disruptions (Tomlin, 2006), while dual or multi-sourcing protects against supplier-specific shocks (Chopra & Sodhi, 2014). Geographic redundancy—near-shoring or local sourcing—shortens lead times and reduces exposure to global transport bottlenecks (Foerstl et al., 2016). Finally, parallel manufacturing sites or

Information technology systems ensure business continuity if a primary facility is compromised (Sheffi, 2005).

Because the four capabilities interact, resilience initiatives must be integrated. Excessive safety stock can erode agility, and collaboration that ignores contractual flexibility may lock partners into rigid routines. Firms therefore combine selected levers—e.g., limited buffer inventory with postponement and data-sharing—to achieve robustness at acceptable cost.

2.4.3 Risk management and resilience

It is important to recognize that excessive risk aversion and attempts to mitigate all conceivable risks without a holistic approach can inadvertently hinder supply chain resilience. When firms focus narrowly on eliminating individual risks, they may implement measures that conflict with one another or lead to inefficiencies (Wieland & Wallenburg, 2012). For instance, maintaining excessively high levels of safety stock to guard against supply disruptions can tie up capital and increase inventory holding costs, thereby reducing the firm's financial flexibility and agility. Over-diversification of the supplier base, while intended to reduce dependency on single suppliers, can dilute relationships and reduce the benefits of collaboration and trust with key partners (Kern et al., 2012). This dilution can lead to decreased information sharing and coordination, impairing the supply chain's overall responsiveness.

Moreover, an overly cautious approach may stifle innovation and adaptability. Firms that are preoccupied with mitigating every potential risk may become resistant to change and reluctant to adopt new technologies or processes that could enhance competitiveness (March & Shapira, 1987). Such risk-averse behavior can result in rigid supply chain structures that lack the flexibility to respond effectively to unforeseen events. Additionally, the costs associated with exhaustive risk mitigation strategies can outweigh the benefits, diverting resources from strategic initiatives that contribute to long-term resilience (Jüttner et al., 2003).

Therefore when adopting a risk management strategy, it must be done while keeping a balanced and holistic view. By understanding the interdependencies of risk factors and

focusing on the most critical vulnerabilities, firms can allocate resources effectively and develop strategies that support both resilience and operational performance (Manuj & Mentzer, 2008). Embracing a risk-aware culture rather than a risk-averse one encourages proactive planning and flexibility, enabling the supply chain to adapt and thrive in the face of disruptions.

2.5 Sourcing strategies and resilience in a VUCA world

The last part of the literature review consists in identifying the relation between sourcing strategies and supply chain resilience. To do so, the study uses the definition of resilience and the four core resilience strategies identified by Tukamuhabwa et al. (2015). By linking the latter resilience framework with sourcing strategy's impacts, the study gives a first outline to understand the link between sourcing strategies and their impact on the supply chain resilience. It will give the paper a framework to identify the right criteria to define a resilient « glocal » sourcing strategy. This approach is motivated by the fact that literature studied and highlighted the importance of purchasing side management, and especially the strategic sourcing process, in developing the resilience of the supply chain (Pereira et al., 2014; Pereira et al., 2020). According to Pereira et al. (2020), the purchasing and supply management function, due to its interface nature, plays a role both internally and externally in strengthening the resilience of the supply chain. In their article, they set out the proactive practices of PSM (Information sharing redundancy of suppliers and critical items, Supplier relationship which stimulates collaboration, product flexibility, etc.), as well as the reactive practices (collaboration between the buyer and supplier to overcome disruption for critical supplies, flexibility to receive the ordered material in different volumes, Collaboration between buyer and supplier by exchanging materials in stock, etc.) that can be used to strengthen the resilience of the supply chain. These practices can be used as a basis for developing a resilient glocal dual sourcing strategy framework, and draw to varying extents on the four major aspects of resilience developed by Tukamuhabwa et al. (2015)

2.5.1 Sourcing strategies fostering collaboration and agility

Literature showed the impact of sourcing strategies on the collaboration aspect. The study of Cajal-Grossi et al. (2023) compared the JIT sourcing strategy with the relationality sourcing strategy in disruption time, emphasizing the importance of collaboration and long-term relationship with suppliers in achieving supply chain resilience as relationality performed better during COVID-19 period. Collaboration and long-terms relationship enable better visibility throughout the supply chain, facilitating the exchange of information (Orlando et al., 2021). This gives the firms the opportunity to detect early warning signals, and therefore to adapt their supply chain management strategy accordingly. A paper of Scholten & Schilder (2015) already describes the role of collaboration as an antecedent of supply chain resilience. Their multiple case-study analysis, through the buyer-supplier relationship spectrum, also supports the statement that information sharing and collaborative communication help improving supply chain visibility, allowing for the detection and the implementation of appropriate responses to upstream or downstream disruptions. This further supports the synergy identified by Tukamuhabwa et al. (2015) between collaboration and agility while potentially reducing/arming the flexibility of the supply chain. The sourcing strategy which emphasizes the most the collaboration and relationship aspects is the single sourcing, which has been largely studied in the literature, whether it is about its benefits with easier supplier management, cost reduction through economy of scale, better supplier relationship development and collaboration, or its drawback and risk, with the supplier dependency and the current discussions about supply disruption (Namdar et al., 2017 ; Swift, 1995 ; Treleven, 1987). Therefore, such strategy, whether it is single sourcing for a single product or single sourcing for multiple products, foster collaboration, and agility through better collaboration and better visibility of the supply chain, while at the same time exposing the firm to potential disruption as it reduces the supply flexibility of the company.

2.5.2 Sourcing strategies fostering redundancy and flexibility

At the opposite end of the sourcing spectrum are strategies designed to embed redundancy—spare capacity, alternative suppliers or parallel logistics routes—into the network. Redundancy is often described as the costliest but most powerful lever of resilience (Tukamuhabwa et al., 2015). In procurement terms it usually means contracting a backup supplier before any disturbance occurs, so the firm can redirect orders when its primary source falters. Kamalahmadi et al. (2021) show that such pre-arranged "buffer" contracts cut expected lost sales and total cost while lifting service levels during disruption scenarios.

Because each extra source also broadens the firm's manufacturing footprint, redundancy automatically raises supply-base flexibility—the ability to shift volumes or switch routes. Geography, however, matters: if primary and secondary suppliers sit in the same hazard zone, a single flood or lockdown can hit both simultaneously (Tukamuhabwa et al., 2015). Flexibility can also be achieved without redundancy—through, for example, volume-flex clauses with a single supplier—but firms often prefer that route only when the high, upfront cost of maintaining duplicates outweighs the risk of failure (Kamalahmadi et al., 2021).

Much of the formal literature analyses these trade-offs through decision models. Namdar et al. (2017) compare single, dual and multiple sourcing under low-impact/high-frequency versus high-impact/low-frequency shocks and show that risk-averse firms gravitate to dual sourcing to minimise Conditional Value at Risk. Su and Liu (2014) demonstrate how an organisation with one domestic and one foreign supplier allocates order volumes as disruption frequency and magnitude change; they find that even moderate risk aversion justifies a persistent share for the domestic source despite its higher cost. Likewise, Yu et al. (2009) derive threshold probabilities at which the profit advantage of single sourcing collapses, making a dual portfolio optimal.

Taken together, these studies portray dual sourcing as a calibrated form of redundancy — "just enough" duplication to keep options open without the full complexity of many-supplier portfolios. That middle-path logic frames the present thesis: we examine how a

European manufacturer implements a glocal dual-sourcing arrangement—and whether the promised blend of redundancy and flexibility translates into real resilience.

2.5.3 Implementing sourcing strategies based on component characteristics to enhance supply chain resilience

Resilience strategies and risk mitigation efforts can be costly and, if not carefully targeted, potentially counterproductive. It is crucial for firms to focus their efforts where they matter most to enhance supply chain resilience effectively (Christopher & Holweg, 2011). Implementing sourcing strategies based on the characteristics of components or commodities allows firms to allocate resources efficiently and tailor their approach to the specific risks and requirements associated with different items.

One widely recognized tool for categorizing purchased items and developing appropriate sourcing strategies is the Kraljic Matrix (Kraljic, 1983). This matrix classifies components based on two dimensions: profit impact and supply risk. Profit impact refers to the strategic importance of the component, including factors like cost and contribution to product quality. Supply risk involves the complexity of the supply market, such as the availability of suppliers and the potential for supply disruptions.

The Kraljic Matrix divides components into four categories: non-critical items, leverage items, bottleneck items, and strategic items. By applying the Kraljic Matrix, firms can prioritize their risk management efforts and allocate resources to components that have the most significant impact on their operations and profitability.

An additional aspect in implementing sourcing strategies is prioritizing high-volume components, which often represent a significant portion of a company's purchasing expenditures and have a substantial impact on production processes (Olsen & Ellram, 1997). Focusing on these components allows firms to achieve greater economies of scale, negotiate better terms with suppliers, and more effectively mitigate supply chain risks. To manage high-volume components effectively, purchasing departments need to collaborate closely with sales and demand planning functions to ensure alignment with market

demand (Caniëls & Gelderman, 2005). Accurate sales forecasts enable procurement professionals to anticipate required volumes, plan inventory levels, and negotiate long-term agreements with suppliers. This cross-functional collaboration enhances supply chain resilience by ensuring that sourcing decisions are informed by up-to-date market intelligence and demand projections, thereby reducing the risk of stockouts or excess inventory (Monczka et al., 2009).

Additionally, the characteristics of the product, like complexity, technological specificity, and time required for supplier qualification, play a role in shaping sourcing strategies. For complex products or those requiring specialized technologies, the pool of suppliers may be limited, increasing supply risk (Handfield et al., 2009). The time and resources needed to qualify a new supplier can be substantial, making it impractical to switch suppliers quickly in response to disruptions. In such cases, building strong relationships with existing suppliers and investing in collaborative risk management becomes essential (Schiele, 2019).

Furthermore, for certain components, traditional resilience strategies like inventory buffering may be impossible or impractical. For example, products with a short shelf life, high obsolescence risk, or high storage costs cannot be stockpiled effectively (Christopher & Peck, 2004). In these situations, firms need to explore alternative strategies, such as flexible sourcing arrangements, demand management, or product design modifications that allow for the use of more readily available materials.

2.5.4 Glocal dual sourcing, rationale and challenges to foster supply chain resilience

Implementing a glocal dual sourcing strategy—combining both global and local suppliers—presents a promising approach for manufacturing firms aiming to enhance supply chain resilience. This strategy seeks to capitalize on the cost efficiencies and specialized capabilities of global suppliers while leveraging the responsiveness and reliability of local suppliers (Grandinetti & Tabacco, 2015). By diversifying the supply base geographically, firms can mitigate risks associated with disruptions, adapt more swiftly to market changes, and maintain competitive pricing.

The rationale behind adopting a glocal dual sourcing strategy lies primarily in the security of supply. Global sourcing offers access to a broader range of suppliers and potentially lower production costs due to economies of scale and lower labor expenses in certain regions (Kotabe & Murray, 2004). However, it also exposes firms to risks such as longer lead times, geopolitical uncertainties, and increased vulnerability to global disruptions (Holweg et al., 2011). Local sourcing, on the other hand, provides advantages in terms of shorter lead times, better communication, and greater control over the supply chain (Jin, 2004). By integrating both, firms can achieve flexibility and redundancy, ensuring continuity of supply even when one source faces challenges (Tang, 2006).

Additionally, glocal dual sourcing enhances agility and communication within the supply chain. Local suppliers can respond more quickly to sudden changes in demand or unexpected operational issues, allowing firms to adapt to client needs or geopolitical problems effectively (Srinivasan & Swink, 2018). This agility is crucial in today's volatile markets, where customer preferences and external conditions can shift rapidly. Simultaneously, maintaining relationships with global suppliers helps firms remain price competitive while not compromising on the security of their supplies (Steinle & Schiele, 2008).

Despite these advantages, there are significant challenges associated with implementing a glocal dual sourcing strategy. One of the primary hurdles is the complexity of managing multiple suppliers across different regions (Trent & Monczka, 2003). This complexity includes finding the right suppliers in foreign countries, which involves overcoming barriers such as cultural differences, language barriers, and varying business practices (Kull & Wacker, 2010). Establishing trust and ensuring quality standards with foreign suppliers can require substantial time and resources (Jean et al., 2010).

Communication is another critical challenge. Coordinating with suppliers across different time zones and cultural contexts can lead to misunderstandings and delays (Paulraj et al., 2008). Effective communication is essential for synchronizing production schedules, managing inventory levels, and responding to disruptions promptly. Firms need to invest in robust communication systems and develop cross-cultural competencies to manage these relationships successfully (Golini & Kalchschmidt, 2011).

The management cost associated with glocal dual sourcing is also a significant consideration. Managing a larger and more diverse supplier base requires more resources dedicated to supplier relationship management, quality control, and logistical coordination (Hald & Ellegaard, 2011). There may be increased administrative burdens, as well as the need for more sophisticated information systems to track and integrate data from multiple sources (Gunasekaran et al., 2015). Allocating resources effectively between global and local suppliers can be challenging, and firms must balance the benefits against the additional costs incurred.

Collaboration with suppliers is essential to overcome these challenges, but it can be difficult to achieve, especially with global suppliers who may have different expectations and business practices (Petersen et al., 2008). Building strong partnerships requires ongoing effort, mutual trust, and a clear understanding of each party's roles and responsibilities. Firms must navigate differences in legal systems, regulatory requirements, and ethical standards, which can complicate collaboration efforts (Handley & Benton, 2013).

In the academic literature, much of the research on dual sourcing strategies focuses on theoretical models and simulations to explore their effectiveness and optimal configurations (Berger et al., 2004; (Niu, Baozhuang et al., 2019; Yu et al., 2009). These studies often examine the trade-offs between cost and risk in supply chain design but may not address the practical challenges firms face in implementing such strategies and explain less how the existing challenges could be overcome. There is a gap in empirical research, particularly qualitative case studies that investigate how firms navigate the complexities of glocal dual sourcing in real-world contexts.

This thesis aims to address this gap by exploring how a European manufacturing firm implements a glocal dual sourcing strategy to enhance supply chain resilience. Through a qualitative case study approach, the research will delve into the practical considerations, challenges, and benefits experienced by the firm. It will examine how the firm identifies and qualifies suppliers, manages communication and coordination, allocates resources, and fosters collaboration. By providing insights into the tactical aspects of glocal dual sourcing, the study contributes to a deeper understanding of how such strategies can be effectively implemented to foster supply chain resilience.

Figure 1. Challenges encountered when implementing a glocal dual-sourcing strategy (Source: Author illustration).

3 Research methodology

In this section, the research methodoly is presented, which research design has been used and why, as long as an overview of the company selected for the case study, and how the data has been collected.

3.1 Research Philosophy and Approach

When it comes to the research philosophy behind this study, it follows the interpretivism, as it focuses on understanding the context within which participants operate and the meanings they ascribe to their actions and experiences (Saunders et al., 2023). Since the study aims to explore why and how companies implement glocal sourcing strategies and achieve resilience, it requires a deep understanding of the specific contexts of the company, the perceptions, and the interpretations of the participants. Moreover, the study is of an exploratory nature, and seeks to uncover new insights and understandings about how glocal sourcing strategies can be implemented. Interpretivist research is well-suited for exploratory studies as it allows for flexibility and adaptation as new insights might emerge during the research process.

This master thesis aims to provide new findings and develop a potential framework for a resilient dual sourcing strategy based on the findings from a data collection. Therefore, the study is embedded in an inductive process of theory development (Saunders et al., 2023).

The study aims to answer the research question “how can manufacturing companies implement glocal sourcing strategies to achieve resilience?”. As previously stated, such a research question requires an exploratory approach, as it aims to understand how a manufacturing firm can implement a resilient global and local sourcing strategy, taking into account practical realities. Academic literature has focused on the study of sourcing strategies from a mathematical and theoretical angle, through the development and use of models. However, strategy implementation requires taking into account the organizational context, whether in terms of the specificities of the products purchased, or the

company's environment. A qualitative approach allows these complexities to be considered.

3.2 Research Design

3.2.1 Exploratory Case Study

An exploratory case study design has been adopted to investigate the implementation of glocal dual sourcing strategies within a real-world context. This method is chosen to allow an in-depth investigation of the processes, practices, and contextual factors involved. According to Ghauri et al. (2020), the case study is associated with exploratory research, and is especially efficient when it comes to the studying of a phenomenon that cannot be extracted of its natural setting, and when there are too many variables to be considered.

3.2.2 Case Selection: Company Overview

The selected case for this study is a Swiss-based multinational manufacturing company specializing in the production of industrial pumps and vacuum systems. The focus is on its research and development (R&D) and production site, located in Switzerland. Employing approximately 460 to 470 people, the company operates within the medium-volume production segment, with an annual output capacity of around 30,000 pumps. These pumps serve a diverse range of industries, therefore the company has a broad customer base. For instance, in the agri-food sector, the company's pumps are utilized for vacuuming food products, contributing to food preservation and packaging processes. In the electronics manufacturing industry, their vacuum systems are essential for the production of electronic components and microchips. The company's products thus play a role across various sectors, and has a significant presence in the industrial manufacturing landscape.

Financially, the company reports an annual turnover between 100 and 110 million Swiss Francs, reflecting robust market performance despite a slight decrease compared to the previous year. It is part of a larger industrial group comprising 18 factories worldwide. While the main research and development (R&D) and the original production site is based in Switzerland, the group has additional manufacturing facilities in Germany, where the headquarters are located, but also the Czech Republic, the United Kingdom, and the United States. Emerging operations in India and China are also underway, though these sites are not yet fully operational. The expansion into these regions signifies the company's strategic efforts to enhance its global footprint and competitiveness.

Currently positioned as the second-largest provider in the global vacuum systems market, the company harbors ambitions to become the market leader. This objective involves increasing its market share and surpassing its main competitors through innovation, quality enhancement, and superior customer service. The company's strategic focus includes leveraging its international presence and optimizing its sourcing strategies to achieve these goals.

The selection of this company as the case study is particularly relevant due to its active employment of both local (domestic) and global (foreign) suppliers in its sourcing practices. The company's manufacturing processes involve complex components, such as casting parts and motors, which have high transfer costs and long qualification times. These components are critical to production continuity and present challenges in sourcing, necessitating robust and resilient strategies. The company's context provides a rich environment to explore why and how glocal dual sourcing can enhance supply chain resilience without compromising competitiveness.

By examining this company's experiences, the study aims to gain in- insights into the practical implementation of glocal dual sourcing strategies within a multinational manufacturing context. The company's ambition to become the global market leader underscores the importance of effective sourcing strategies in achieving strategic objectives. Additionally, the company's diverse industry engagement and global expansion efforts contribute to the complexity of its supply chain, making it an ideal subject for this research.

The case selection follows a purposeful sampling strategy, specifically as a critical case (Ghauri et al., 2020), to provide valuable contributions to theory development in the area of glocal dual sourcing. The insights gained from this company can offer broader implications for other manufacturing firms seeking to enhance their supply chain resilience through similar strategies.

3.3 Data collection

3.3.1 Semi-Structured Interviews

To investigate how the company implements glocal dual sourcing strategies to achieve supply chain resilience, this study employed one-to-one semi-structured interviews conducted via the video conferencing tools Microsoft Teams. Semi-structured interviews are suitable for exploratory research because they offer the flexibility to delve deeper into topics as new insights emerge, while still providing a consistent framework across different interviews (Saunders et al., 2023). An interview guide was developed to ensure consistency and to cover key areas relevant to the research question. The guide included open-ended questions related to participants' roles and responsibilities, their experiences with sourcing strategies, their perceptions of glocal dual sourcing, the challenges and benefits associated with implementing dual sourcing, and the impact of these strategies on supply chain resilience.

A purposeful sampling approach was employed to select interview participants who are directly involved in the company's sourcing decisions and supply chain management. The sample comprised the Purchasing Director, who provides strategic insights into sourcing policies, company objectives, and oversees the operations of the purchasing department. Two Global Purchasers were also interviewed: one responsible for motors, offering perspectives on sourcing complex, high-demand components with long qualification times; and another specializing in casting parts, sharing experiences with components that have high transfer costs and are critical to production. Additionally, three Sourcing Buyers participated in the study, providing operational viewpoints on day-to-day sourcing

activities, challenges faced, and the practical implementation of sourcing strategies. These participants were chosen due to their comprehensive and relevant knowledge of the company's sourcing practices, making them ideal informants for this study.

Table 1. Interview Recap Table

Respondant	Role in the Company	Number of interviews	Interview Time	Date of the interview
Repondant A	Purchasing Director	2	71min 59min	10/04/2024 24/07/2024
Repondant B	Global Purchaser for Motors	1	38min	02/08/2024
Repondant C	Sourcing Buyers (Other parts)	1	40min	05/08/2024
Repondant D	Sourcing Buyers (Casting/Motors)	1	47min	24/07/2024
Repondant E	Global Purchaser for Casting Parts	1	52min	02/08/2024
Repondant F	Sourcing Buyers (Mechanical parts)	1	34min	06/08/2024

The interviews were conducted in French as it is the mother tongue of both the author and the interviewees, therefore ensuring fluent exchanges, nuanced expression of ideas, and a minimal risk of misinterpretation in the data gathered. All interviews were video-recorded and transcribed verbatim with TurboScribe (access the 10/08/2024); each transcript was then reviewed line-by-line by the researcher to correct automated errors and ensure fidelity to the original French. Once validated, the transcripts were translated into

English by the author. To protect confidentiality, the anonymised excerpts that are directly relevant to the analysis are kept undisclosed in the field notes of the author.

3.3.2 Secondary data collection

To corroborate the interview evidence, I analysed a restricted set of internal records to which I had access during my 2023 employment with the focal firm. These included (i) SAP purchase-order and lead-time extracts (2019-2023), (ii) inbound quality-non-conformance logs, and (iii) three slide decks and KPI dashboards prepared for the sourcing committee. Because the material is commercially sensitive, it remains confidential and is **not reproduced in the thesis**—even in anonymised form. Instead, key figures (e.g., average lead-time reduction, dual-sourcing share) were used solely to triangulate interview statements.

3.4 Data analysis

The data collected from the semi-structured interviews were analyzed using thematic analysis, a qualitative analytic method for identifying, analyzing, and reporting patterns (themes) within data (Braun & Clarke, 2006). Thematic analysis was selected for this study because it provides a flexible and systematic approach to handling qualitative data, allowing for rich, detailed, and complex accounts of data (Nowell et al., 2017).

Given the interpretivist philosophy and inductive approach of the research, thematic analysis is relevant. It enables the researcher to explore how participants make meaning of their experiences and to understand the reality constructed by them (Braun & Clarke, 2006). This method aligns with the study's aim to uncover insights into how the manufacturing company implements glocal dual sourcing strategies to achieve supply chain resilience.

The analysis involved transcribing the recorded interviews verbatim to ensure accuracy and immersion in the data. Through repeated reading of the transcripts, patterns and themes emerged that were pertinent to the research question. This process facilitated

the identification of key themes related to the motivations behind adopting glocal dual sourcing, the implementation processes, challenges faced, and the impact on supply chain resilience.

Thematic analysis is appropriate for this study as it does not require adherence to any pre-existing theoretical framework, allowing themes to emerge directly from the data (Braun & Clarke, 2006). This openness is needed for exploratory research as the aim is to generate new understandings rather than test hypotheses. Moreover, it supports the analysis of the participants' perspectives and experiences in depth, providing a nuanced understanding of the complex phenomena under investigation (King, 2004).

3.5 Reliability, validity and limitations

3.5.1 Trustworthiness and Validity

To ensure the credibility and trustworthiness of the study, strategies in line with established qualitative research methodologies were employed (Lincoln & Guba, 1985; Shenton, 2004). Triangulation was utilized by comparing data from different participants to identify common themes and discrepancies, thereby enhancing the validity of the findings (Patton, 1999). This approach helps in cross-verifying information and provides a more comprehensive understanding of the phenomena under study.

Member checking was conducted by providing participants with the opportunity to review their interview transcripts and the preliminary findings to confirm. This practice is recommended to enhance credibility and ensure that the participants' perspectives are accurately represented (Creswell & Miller, 2000).

Thick descriptions of the company context, participants' perspectives, and the themes identified were provided to allow readers to assess the transferability of the results to other contexts (Ponterotto, 2006). By offering detailed accounts of the research setting and findings, the study enables readers to determine the applicability of the insights to similar contexts.

3.5.2 Limitations

The study acknowledges certain limitations inherent in qualitative case study research (Yin, 2018; Flyvbjerg, 2006). As a single case study focusing on one company, the findings may not be generalizable to all manufacturing firms, which is a common limitation in case study research (Stake, 1995). This limitation affects the external validity of the study; however, the in-depth insights provide valuable contributions to understanding glocal dual sourcing strategies and can inform theory development (Tsang, 2014).

Participants' responses may be influenced by their positions within the company or a desire to present the company in a positive light, introducing potential bias (Maxwell, 2013). Social desirability bias and positional bias can affect the authenticity of the data collected. Efforts were made to mitigate this through careful questioning, and assuring participants of confidentiality and anonymity, as recommended by King and Horrocks (2010).

Time constraints may limit the depth of investigation into the long-term outcomes of the implemented strategies. The cross-sectional nature of the study provides a snapshot in time, which may not capture evolving dynamics or long-term effects (Pettigrew, 1990). Longitudinal studies could provide additional insights into the sustainability and long-term impact of glocal dual sourcing practices, allowing for the observation of changes and developments over time (Saunders et al., 2016).

4 Results

Part 4 presents the empirical findings of the single-case study, charting how the focal manufacturer's sourcing model evolved from a cost-driven, globally focused approach to a "glocal" dual-sourcing configuration. The section first unpacks the motivations behind the shift, then details the processes used to develop and manage parallel local and distant suppliers, and finally highlights the strategy's practical constraints.

4.1 Why the Firm Uses Glocal Dual Sourcing

4.1.1 Initial Motivation: Cost Savings with Global Suppliers

The firm's initial motivation for adopting a dual sourcing strategy was driven by the goal of achieving cost savings through global suppliers.

Respondent A stated:

"But more and more, we have created this policy of double sourcing because we realised that there were some very interesting prices, obviously in low-cost countries."

Similarly, Respondent F mentioned:

"Initially, since I was asked to cut costs and make a profit, you take the High Runners and then you take the high-cost parts. Sometimes the prices were divided by 4."

These statements indicate that the firm was initially focused on reducing procurement costs by leveraging the lower production and labor costs available in low-cost countries. By targeting high-volume and high-cost components, referred to as "High Runners", the firm could achieve significant cost reductions, sometimes reducing prices by up to 75%.

However, the pursuit of cost savings was not without its challenges. The firm recognized that while global suppliers offered financial benefits, they also introduced new risks and complexities that needed to be managed effectively.

The COVID-19 pandemic has further accelerated this process. Emphasis is being placed on securing the supply chain, redoubling interest in the dual sourcing strategy, as explained by respondent E:

"It's true that Covid has played a big part in speeding up the change in these sourcing strategies, which means that we are still aiming to reduce costs, which are ultimately reflected in the price of the final product. But we also put a lot of emphasis on security, and today we're really in a phase of securing, of double sourcing."

The sourcing strategy of the firm obviously still aims to reduce the cost of the purchased product, however it is doing so while considering the security of the supply chain. Transitioning from a sole focus on cost savings, the firm began to consider other factors that impacted their supply chain efficiency and resilience.

4.1.2 Supply Chain Risks and the Need for Resilience

Supply chain resilience considerations are even more important for the firm since they have a long supplier qualification process, as stated by respondent A who is in charge of the purchasing department of the focal firm:

"we adopted, I would say, the automobile method. So, to bring in a supplier a supplier a we have to go through a fairly long process of qualification process."

But they also have some part for which the qualification time is long as well. In this case even switching part from one validated supplier to another could be time-consuming. If the new supplier never had to provide the firm with this type of part, it will have to go through the whole process of product qualification. Respondent F gave the example of the bearing commodity:

"In the case of bearings, it's already more complicated because these are extremely sensitive rotating elements for us, which require long-term testing. So it's impossible to change supplier in the blink of an eye. In this case, we really needed a second source to secure the one we had in Europe."

Such components with a long qualification time are vulnerable to potential disruptions, or production failure and represent a risk for the supply chain, since finding a viable new source within a short period of time is impossible. Finding and developing a new source abroad is way for the firm to secure a second source, and make some cost savings at the same time. Moreover, respondent A also elaborated on the risk of depending on a single supplier:

“We have two or three cases where in fact we have a single sourcing supplier. That's dangerous for price reasons.”

Dependence on a single supplier leaves the company vulnerable to production failure, whether operational or disruption-induced, and vulnerable to fluctuations in the prices proposed by the supplier.

However, working with distant suppliers also entails risks. As the firm expanded its global sourcing efforts, they became increasingly aware of various risks associated with relying solely on foreign suppliers. These risks highlighted the need for a more resilient supply chain strategy, and comforted the firm in its dual sourcing including both a domestic supplier and a foreign supplier.

Respondent A pointed out geopolitical risks:

"If tomorrow China decides to invade Taiwan and sanctions are imposed on China, I may no longer be able to source from China. So I'd be very happy to have my European supplier solution. That's a typical case we're looking at right now."

Respondent B added:

"As you can see, geopolitically it's quite complicated. Ten years ago, there was no risk. But now it's become something to be taken into account in the dual source."

Transportation risks were also a significant concern as sourcing from afar increases transport risks, whether it is transport cost, or delivery delays. Respondent A gave the recent example of the Red Sea crisis:

“This crisis in the Red Sea means that we have to go around Africa. That means a few weeks more shipping. So the cost of transport is higher, that's for sure. But beyond the cost of transport, there's the delay in obtaining parts.”

These insights reflect the firm's growing awareness of geopolitical uncertainties that could disrupt their supply chain. Political conflicts, trade sanctions, and diplomatic tensions could suddenly make foreign suppliers inaccessible, threatening production continuity.

Recognizing these risks, the firm understood that relying solely on single suppliers, whether local or foreign, could jeopardize their operations. Glocal dual sourcing appeared as a solution to enhance supply chain resilience to protect against these vulnerabilities. Transitioning from this realization, the firm considered how engaging in global sourcing while keeping a domestic anchor point is a way for the firm to mitigate these risks.

4.1.3 Necessity of the Glocal Approach

To effectively manage the identified risks while still benefiting from cost savings, the firm determined that a glocal dual sourcing approach, combining both global and local suppliers, was essential. One of the first advantages is to have two suppliers in two different parts of the world

Respondent B emphasized the importance of geographical diversification:

"The idea is always to have one source and a second source that is developed in a different place, to avoid a local risk, for example."

This approach allows the firm to mitigate regional risks by not having all suppliers concentrated in one geographical area. If a geopolitical event, natural disaster, or other regional disruption affects one supplier, the firm can rely on the other supplier located in a different region.

Respondent A further noted the benefits of combining global cost advantages with local reliability:

"My supply chain is becoming resilient. And it can be competitive thanks to China. After all, that's my goal."

By maintaining relationships with both local and global suppliers, the firm can achieve cost savings while also ensuring supply chain resilience. The local supplier offers advantages such as proximity, ease of communication, and quicker response times to issues, whereas the global supplier provides the financial benefits of lower production costs.

Respondent A also highlighted the flexibility this strategy provides:

"The advantage of dual sourcing is that it gives me the potential to adjust to any range of risks that may arise. Whatever the risk."

This adaptability is crucial in an unpredictable global environment. The firm can adjust order volumes between suppliers based on current conditions, such as lead times, transportation costs, or emerging risks.

Moreover, Respondent E pointed out the necessity of the glocal approach to remain competitive:

"If we develop local production and only source locally on our European lines, we're going to have a real problem with competitiveness."

This underscores that solely sourcing locally could lead to higher costs, making the firm's products less competitive in the global market.

By adopting a glocal dual sourcing strategy, the firm strikes a balance between cost efficiency and supply chain resilience. It leverages the strengths of both global and local suppliers to maximize efficiency, mitigate risks, and maintain competitiveness.

Transitioning from understanding why the firm chose this approach, the next focus is on how the firm implements the glocal dual sourcing strategy in practice, navigating the associated challenges and capitalizing on the benefits.

4.2 How the Firm Implements Glocal Dual Sourcing

4.2.1 Initial Development with Local Suppliers

The firm begins its glocal dual sourcing strategy by initially collaborating with local suppliers during the product development phase. This approach simplifies communication and facilitates technical coordination.

Respondent A explained:

"When we're going to do dual sourcing, [...], we always start by working with a single supplier."

This indicates that the firm prioritizes working with a single local supplier during the initial stages to avoid complicating the development process. By doing so, they can manage the design and specifications of the new product without the added complexity of coordinating with multiple suppliers.

Further emphasizing the importance of local collaboration, Respondent A added:

"First of all, the design is fixed with a single supplier. And generally, this first launch is very often a local supplier. They know us well. We know our engineering. We need meetings with them to reach agreement, to agree on the technique, the weight, even on the price we're looking at in the end."

The familiarity and established relationships with local suppliers enhance communication efficiency. Local suppliers understand the firm's engineering standards and can participate in frequent meetings to align on technical aspects and pricing. This close collaboration is crucial for fine-tuning the product design. Moreover, respondent A also identified another incentive to start initial development with a local source known by the firm:

“When you have this dual sourcing strategy, the advantage of starting with a local supplier is that it's easier to explain internally.”

Respondent B further elaborated on the firm resistance to change due to previous bad experiences:

“I think we've also had some bad experiences in the past, which means that we're always a bit cautious about change. Other teams in the company can also put obstacles in the way. It's also important not to fight internally to move projects forward”

Working with a close supplier, known by the firm, and with whom collaboration is easier, reduces the internal resistance the purchasing team might encounter when implementing dual sourcing. It is especially important since sourcing decisions are validated with the support of the R&D and the Quality department. Respondent F explains:

“We now have rules that we have to follow, where R&D is questioned about the changes or the additional suppliers we are going to introduce for the product. Then there's quality. Once we have the two green lights, we can send the sample orders to the supplier.”

In this case, initially working with a close supplier facilitates internal and external alignment. The other benefit of starting initially with a domestic supplier before transitioning to dual sourcing by adding the foreign supplier is the cost savings incentive. This directionality of the dual sourcing gives more value to it as it is now a sourcing strategy allowing the firm to make cost reduction and to secure its supply chain at the same time. Implementing dual sourcing purely for supply chain security, without the incentive of cost savings, is challenging due to additional costs and resource requirements. Respondent F highlighted management reluctance:

"Developing such a strategy inevitably requires extra costs... From the moment that there isn't an electroshock that says watch out it can be problematic, as it was the case with Covid for instance, things don't really change."

Without a clear cost benefit, convincing management and stakeholders to invest in dual sourcing for resilience alone is challenging. It often takes a significant disruption to demonstrate the value of such investments.

The point is now to understand how the firm transitioned from this initial phase by integrating a foreign supplier into their sourcing strategies and achieving glocal dual sourcing.

4.2.2 Transition to Dual Sourcing with Global Suppliers

After stabilizing the product design and specifications with the local supplier, the firm begins the process of identifying and qualifying global suppliers to achieve cost savings and enhance supply chain resilience.

Respondent A described this transition:

"We often work locally first. And then, little by little, we ask for bids from our Chinese and Indian sourcing hubs."

By gradually seeking bids from global suppliers, the firm assesses potential cost benefits while ensuring that these suppliers can meet their technical and quality requirements. The second point of this transition is for the firm to assess if the foreign source is actually profitable. Respondent A explains the calculation at play while doing so:

“To go or not to go, that's already a calculation that guides us. We look at how much he'll sell us the part. You have to add a bit of transport costs. You may have to add customs duties. You also have to add storage costs, because when I bring in a part from China, I'm not going to order one part at a time, I'm going to bring in a container. We've come up with a rule of thumb that says we need to save about 15% compared with the European solution.”

So the firm use a total cost calculation to ensure that the development of the foreign source results in cost savings. Then the firm will engage in the qualification of the new foreign supplier and the product it will provide the firm with, which is a meticulous and time-consuming process. Respondent A noted:

"If we really think there's an interest, we'll have to go through the whole process of qualifying this new supplier. So it's a very long process. First, you have to fine-tune the product and then you have to approach the potential distant supplier."

This process involves extensive evaluations to ensure that the global supplier can deliver products that meet the firm's standards. It includes audits, capacity assessments, and compliance checks. Frequent communication and visit on site are therefore essential in this process. Distance and cultural barriers are factors that complicate this approach. Respondent A explained:

"With Asia, you only work half a day. We mustn't forget that. [...] With a Chinese supplier, you also realise that their understanding and response is not quite what you would expect. And that's a question of culture."

These operational challenges which include time zone differences, language barriers, and cultural misunderstandings, make it difficult to coordinate with distant suppliers. Therefore, to assist in identifying foreign and cost-efficient suppliers, the firm leverages its sourcing hubs in low-cost countries. Respondent E explained:

" What we call a purchasing hub is made up of buyers and quality specialists whose job is to monitor suppliers on a day-to-day basis, develop suppliers, monitor the quality of parts and deal with all the things that can't be done easily when you're at a distance."

These local purchasing representatives play a role in bridging cultural and communication gaps. They conduct supplier audits, oversee quality processes, and facilitate negotiations, ensuring that the firm can effectively collaborate with global suppliers. They are especially important as complex products requiring a dual source have long qualification and testing period. The development of a new foreign source implies continuous collaboration, communication and quality monitoring with the supplier to ensure that the product meets the firm requirement. The sourcing hubs therefore allow the firm to identify foreign suppliers, qualify them, and then monitor the qualification of the product that will be sourced from this supplier.

Respondent B emphasized the value of sourcing hubs:

"The sourcing hubs are a great help. I think they add an enormous amount of value to the Group. Having people who are good performers, who also know the suppliers in the different areas, helps to clarify things, and also helps to have a better relationship and better understanding of the culture. It helps to avoid misunderstandings and

misinterpretations, and it gives you important information that might not otherwise have been shared."

These insights highlight how the firm leverages its sourcing hubs in foreign countries to identify and integrate global suppliers effectively, by avoiding cultural barriers, facilitating communication and therefore facilitating the alignment of all the internal and external stakeholders.

The firm has now transition to glocal dual sourcing, and needs to manage both local and global suppliers, which requires careful coordination and strategic planning while also introducing new complexities in the supply chain.

4.2.3 Managing Glocal Dual Sources

Once both local and global suppliers are integrated into the supply chain, the firm actively manages the allocation of orders and monitors supplier performance to optimize cost savings and maintain supply chain resilience.

Respondent A highlighted the use of their ERP system for order allocation:

"I have a file, I call it the dual source file, which lists the parts that can be bought from two suppliers. And we simply establish a percentage. The SAP ERP system triggers orders based on this percentage. Generally, we do 80-20, 75-25, 50-50 or 90-10."

By setting specific quotas for each supplier, the firm can control the flow of orders to balance cost efficiency and supply security. Adjusting these percentages allows them to respond to changing market conditions, supplier performance, and emerging risks.

Respondent F provided insight into how they adjust supplier quotas over time:

"The aim now is to make a quota, what we call a quota in our system, where we say that we're keeping the supplier here in Europe close by, and we set a 50-50 quota, for a certain period of time. Then, if we see that everything is working well in the delivery settings, we can increase the quota to 80% in Asia and 20% here, still to have a foot in both companies."

This gradual shift in order allocation ensures that the firm maintains relationships with both suppliers, preserving the ability to pivot between them as needed. It enhances the firm's ability to mitigate risks associated with regional disruptions, supplier dependency, and logistical challenges. Respondent A discussed the flexibility provided by dual sourcing:

"If, tomorrow, China were to have major difficulties, where in fact lead times are very, very long, as we can see today, I could very well readjust [the quota] in favour of my European supplier."

This flexibility is crucial in managing risks such as geopolitical tensions, natural disasters, or transportation delays that could impact suppliers in a specific region. Respondent D shared an example of how dual sourcing aided during the COVID-19 pandemic:

"The local supplier couldn't keep up with the volume, so the Chinese supplier sent us parts directly machined, so that saved us. On the other hand, China was unable to deliver at one point since during Covid, the borders were closed for some time. So fortunately our local source was there to supply us with raw casting parts that we were able to machine."

This illustrates how the management of dual sources enabled the firm to navigate disruptions affecting both local and global suppliers at different times. Whether it's a failure at the local supplier level, or at the distant supplier level, dual sourcing makes it possible to reallocate resources in order to maintain continuous production. It is also the case when it comes to responding effectively to customer demands, including reliability of supply, but also shorter lead times, Respondent A explained:

"Let's say a customer says I want to buy your pump, but I don't want it in 10 weeks, I want it in 3 weeks. It's in my interest to source locally; in a way, I'm going as fast as I can. So it's in my interest to source locally."

By having local suppliers, the firm can offer shorter lead times to customers who require quick delivery. This flexibility enhances customer satisfaction and the service level of the firm. However, having to manage two suppliers for one type of component also introduces costs and complexities. One of the primary challenges is the increased complexity

and additional resources required to manage multiple suppliers across different regions. Respondent A highlighted the administrative burden:

"From the moment I double source, i.e., I identify supplier A in Europe and then supplier B, after the whole qualification phase, the support of the local offices, etc., somewhere, I still have two suppliers to manage. That means establishing an evaluation of supplier A, an evaluation of supplier B, communicating with them, trying to find action plans with them to improve certain things, etc. It's a bit more complicated than that."

Managing two suppliers entails duplicating efforts in supplier evaluations, communication, and relationship management. This added complexity requires more time and resources from the supply management teams. The firm must coordinate with both suppliers to ensure consistent quality, timely deliveries, and alignment with the firm's standards. Different suppliers may also produce components that are not entirely identical, complicating interchangeability and internal processes. Respondent B explained the issue with engines:

"The complexity associated with the engines comes from the fact that two engines, one supplied by manufacturer A, another engine supplied by manufacturer B, are never completely identical. This means that two different item numbers are used to manage the dual source. You have to duplicate the parts lists and nomenclature lists with each number and find solutions to make the best use of the two sources. And that's not always easy."

Managing non-identical parts requires adjustments in the firm's inventory and production systems. The need to maintain separate item numbers and documentation increases the administrative workload and the potential for errors. Respondent C also highlighted challenges with product identification and responsibility:

"There's also another problem: let's say you order a product from two suppliers with the same article number and tomorrow there's a problem with that part, how do you know which supplier supplied that part? There's bound to be one of the two suppliers, or maybe even both, who will say I accept no responsibility if there's a problem tomorrow."

This issue underscores the importance of traceability in dual sourcing. Without clear identification of which supplier provided a specific part, the firm may face difficulties in addressing quality issues and holding suppliers accountable. Additionally, Respondent D mentioned the duplication of costs:

"That's for sure. You have double stock, you have double supplier, so you have double validation."

The duplication extends to inventory management and the validation processes for both suppliers. This can lead to higher operational costs, which may offset some of the financial benefits gained from sourcing in low-cost countries. This extends to modification costs which are doubled in case of a dual sourced parts as respondent D pointed out:

" It could be a part that has been modified. […] If you want to keep the dual sources, you also have to pay for the local modification."

Any changes to product specifications require updates and modifications at both suppliers, effectively doubling the effort and cost involved. This can be a significant deterrent when considering dual sourcing for products that undergo frequent changes.

Having a dual sourcing strategy for every item is therefore not possible as the process is long and costly. There is a need to identify the strategic parts for which dual sourcing is worth being invested in, as respondent A explains:

“So you don't have to double source everything because, as we said, the process is very long, but from a strategic point of view, yes, I need to secure my supply chain for strategic parts. From the moment they are strategic, it means that I have a certain number of risks and implications.”

This leads to the selection of components for glocal dual sourcing, as the firm applies specific criteria to determine which parts are most suitable for this strategy.

4.2.4 Selecting Components for Glocal Dual Sourcing and alternative strategies

The firm prioritizes certain components for glocal dual sourcing based on strategic importance, cost impact, and the feasibility of alternative resilience strategies.

Respondent A explained the use of the Kraljic Matrix:

"This is the Kraljic's matrix, in which, broadly speaking, we classify types of purchase according to their importance and difficulties. There are five major commodities in our purchases, which represent 75 to 80% of our purchases. These are the ones we have to look after."

By focusing on commodities that constitute a significant portion of their procurement spend, the firm targets areas where dual sourcing can have the most substantial impact on cost savings and supply chain resilience.

Further emphasizing the selection criteria, Respondent A stated:

"We dual source certain items because we consider them to be critical. The critic's consideration will essentially be based on the number of parts I need, the price of the part, the volume of purchases involved—all these parameters, I would say, will come into play."

High-volume and high-cost components are prime candidates for glocal dual sourcing due to the potential for significant cost savings and the critical nature of these parts in production processes. Respondent F shared insights on the initial focus areas:

“Initially, since I was asked to cut costs and make a profit, you take the High Runners and then you take the high-cost parts.”

When the goal was primarily to make cost savings, the choice of the article to dual source was based on the yearly volume and the yearly value of the part. And since the parts with the highest cost are usually complex parts to produce, high volume and high value parts are the majority of the critical parts that the firm need to source.

However as the resilience considerations are getting more and more importance, the firm also considered components critical to production continuity, even if they are low-cost items. Respondent E mentioned:

"We work on the basis of the final product. In other words, we know that this final product is a runner. We know that it sells all the time. And even if this final product includes small parts that cost next to nothing, we also know that this can cause major disruption if we are out of stock."

For such components, crucial production wise, but not that costly or difficult to qualify, glocal dual sourcing could be seen as excessive. Implementing glocal dual sourcing involves additional costs related to supplier qualification, management, and potential duplication of efforts. For components that are less critical or where the risks can be managed through other means, it may not be sensible to invest in dual sourcing. Therefore, the firm employs alternative strategies to enhance supply chain resilience when glocal dual sourcing is not possible or when alternative measures are sufficient. Respondent A explained:

"You have to choose your battles according to their importance... For the small ones, I'll drop them."

This suggests that the firm prioritizes glocal dual sourcing for components that are strategically important and where the benefits outweigh the costs. For other components, alternative strategies are considered more appropriate. The firm utilizes alternative resilience strategies as complements to glocal dual sourcing, recognizing that not all components require the same level of risk mitigation.

Respondent E noted:

"Security is not only achieved through dual sourcing. For small, very inexpensive parts, in some cases we build up a level of stock that would be sufficient in the event of a shortage to restart production or restart with another supplier if the need arose."

For low-cost or non-critical components, maintaining a safety stock may be sufficient to manage supply risks without the additional costs and efforts associated with dual sourcing. Maintaining safety stock, either internally or through agreements with suppliers to hold inventory, is therefore a strategy used when glocal dual sourcing is not cost-effective. Respondent B shared:

"We are now also working with certain suppliers to set up logistics contracts where they will also have some items... which will also enable us to have slightly shorter delivery times."

This approach helps buffer against supply disruptions without the need for multiple sourcing arrangements. The firm employs logistics contracts and framework agreements to ensure suppliers are committed to supporting their needs, which can serve as an alternative to dual sourcing for certain components. Respondent C explained:

"There is the multi-reference framework agreement... Since this supplier has a contract, if tomorrow he has problems delivering to you, it is up to him to offer you a solution."

Such agreements provide legal and operational mechanisms to manage supply risks with single suppliers. These alternative strategies are a result of the firm making efforts to build stronger relationships with existing suppliers to enhance reliability and mitigate risks. Respondent A described this approach:

"If I consider that the dual sourcing effort is too great, then I'll go and make the current supplier more reliable... There are other, slightly different ways of doing things."

By investing in supplier development, developing safety stocks in-house or at the supplier, conducting audits, and establishing contracts, the firm can improve the performance and dependability of single-source suppliers.

It means that the firm strategically applies alternative resilience strategies where they are sufficient to manage risks, reserving glocal dual sourcing for components where alternative measures are inadequate. Respondent C pointed out:

"We can't do what we want with these products... we have to really work on double sourcing because that represents a risk for us."

This indicates that the firm assesses the risk profile of each component to determine the most appropriate resilience strategy. And for components where safety stock is impractical due to size, cost, or long qualification times, dual sourcing becomes essential. Respondent E noted:

"There's dual sourcing, because in some cases, we know that it takes so long to qualify that we need two capable suppliers. If you start with a large part weighing 200 kilos and you put two on each pallet and you say that you need 800 or 1000 in stock to cover the time it takes to qualify a new source, it doesn't make sense."

In such cases, having both a local and a global supplier ensures continuity of supply without the need for excessive inventory holding costs. By identifying and dual sourcing these critical components, the firm create supply chain resilience against production halts due to shortages, especially when safety stock is not a viable option.

There are still two identified limitations to glocal dual sourcing for which the firm does not have a solution for. These two limitations are the customers constraints and the suppliers capacity and responsiveness.

4.3 Limits of glocal dual sourcing

4.3.1 Suppliers' capacity and responsiveness

A critical challenge is the lack of real-time information on suppliers' production capacities, making it risky to reallocate resources swiftly during disruptions. Respondent A acknowledged this limitation:

"In absolute terms, it has to be checked. We don't have that in-house, i.e., we don't have enough people to check a supplier's capacity in real-time today [...] we're not big enough to do that."

Moreover, Respondent D admitted:

"No, it's clearly a risk we're taking. And then the day it happens, we'll quickly ask for offers elsewhere or something like that. But no, we can't support every reference there is."

The firm recognizes that it cannot guarantee that a supplier will have the capacity to absorb additional demand in case of disruption. This uncertainty necessitates contingency planning and may require seeking alternative suppliers on short notice, which is challenging.

Without real-time capacity data, the firm cannot accurately predict whether a supplier can accommodate sudden increases in order volumes. This uncertainty poses a risk when relying on a supplier to step in during emergencies. Respondent B emphasized the importance of relationships in this context:

"Working with a partner who isn't necessarily interested in your business and with whom you don't really have a partnership, he may choose to give his extra volume to someone else."

Without strong partnerships, suppliers may prioritize other clients, especially during high-demand periods. This volume allocation risk undermines the reliability of the backup supplier in a dual sourcing strategy. Respondent F shared similar concerns about supplier capacity constraints during global disruptions:

"In fact, our weight is not that great. People think we're a big group, yes, but in terms of purchasing, we're small compared to the car industry. So at the time, the car industry took precedence over us, and that meant that our lead times were affected. It was very complicated to get parts for our end products."

During crises like the COVID-19 pandemic, firms representing a smaller purchasing share may struggle to secure supplies when companies with a larger purchasing share are given priority by suppliers. Even if the firm does not have a practical solution, it promotes regular communication with suppliers to remain informed of their situation. This is one way of mitigating this risk Respondent A noted:

"But first, we ask our main suppliers quite regularly, at least once a quarter, to say, as a general rule, what is your lead time? We place an order very early on, and above all, we ask for this order confirmation."

By staying informed about suppliers' lead times and capacities, the firm can anticipate potential delays and adjust orders accordingly. By placing orders well in advance, the company informs its suppliers at an early stage so that they are not unexpectedly overwhelmed. This method does have its limits, since these orders are based on forecasts that are less accurate as they are ahead in the timeframe. The second method lies in the selection criteria for suppliers with whom the company wishes to work in the context of dual sourcing. Respondent E highlighted the importance of supplier capacity when selecting a supplier to minimize this risk:

"It remains a real concern [about the reallocation of resources, and supplier production capacity]. That's also why I want to avoid as much as possible, and I'm fighting against it, having the firm develop very small local suppliers because we know we won't be able to use them if one day we really need to do large volumes.."

This underscores the need to select suppliers, especially local suppliers, that have the capacity to handle fluctuations in order volumes, ensuring supply chain resilience.

4.3.2 Customer Constraints

Customer-specific requirements and market pressures can limit the firm's ability to implement dual sourcing effectively.

Respondent D pointed out customer constraints:

"Some of our customers absolutely do not want Chinese engines. You can't say to yourself that you're double sourcing in China. You can't do that."

Customer preferences or regulatory requirements may prohibit sourcing from certain regions, restricting the firm's options for global suppliers and complicating the glocal strategy.

Respondent B mentioned:

"Some customers normally always want to receive the pump with the identical motor. And if we make a change to that, we always have to make sure that it's accepted."

Ensuring customer acceptance of products from different suppliers is essential. Differences in components, even if functionally equivalent, may not be acceptable to clients, limiting the firm's flexibility in sourcing.

5 Discussion

Although the value of supply-chain resilience has become a board-level concern after successive shocks—COVID-19, geopolitical realignments, shipping-lane blockages—the academic record still tells us surprisingly little about how firms can remain globally sourced yet locally secure at the same time. Prior studies either model dual sourcing abstractly or treat "reshoring versus off-shoring" as a binary choice, leaving a practical gap around *glocal* configurations that blend the two. In particular, we know little about the decision sequence by which managers introduce a local-plus-global dyad, the organisational routines that keep cost and risk in balance, and the component characteristics that make such a strategy worthwhile.

The purpose of this study was therefore to understand how manufacturing firms can enhance the resilience of their supply chains without abandoning global sourcing by adopting a glocal dual-sourcing strategy. By examining a Swiss manufacturing firm's practices, we explored both the reasons behind adopting glocal dual sourcing and the methods of its implementation.

Regarding the reasons for adoption, the findings show that cost-saving remains the primary trigger. Despite the growing prominence of resilience in the literature, the firm's overriding concern is still pricing competitiveness; resilience acts as a necessary but secondary criterion. Glocal dual sourcing, in this context, represents a way to combine both objectives.

That cost imperative shapes the firm's implementation logic. The rollout follows a local-first, global-second pathway. Local suppliers are engaged early in product development, where close communication stabilises designs and specifications. Once the product is frozen, the firm qualifies lower-cost suppliers in Asia, capturing labour-cost arbitrage while retaining the original local source as a secure fallback. Tangible savings from the global partner help overcome internal resistance to sourcing changes.

To manage the added complexity, the firm established regional sourcing hubs staffed by local experts who identify capable suppliers, bridge cultural gaps, and negotiate in local

languages. These hubs, together with the original local partner, give the buying company flexibility to switch volumes quickly during a disruption. Finally, the company limits glocal dual sourcing to components with long qualification times, where redundancy is practically mandatory; simpler items remain single-sourced with safety stocks.

In sum, the case illustrates how a manufacturing firm can operationalise glocal dual sourcing as a calibrated blend of redundancy and cost efficiency, addressing an implementation gap that the extant literature has so far treated only in theoretical terms.

5.1 The reasons to use glocal dual sourcing

5.1.1 Cost savings as primary incentive to use glocal sourcing

The firm's initial motivation to adopt a dual sourcing strategy was primarily driven by the pursuit of cost savings through global suppliers, particularly those in low-cost countries. This aligns closely with the literature emphasizing cost reduction as a fundamental driver for global sourcing decisions. Kotabe and Murray (2004) assert that global sourcing was first used primarily to benefit from advantageous prices for components or products. Similarly, Monczka et al. (2009) highlight that firms engage in international purchasing to leverage lower production and labor costs available in foreign markets. The focus on "High Runners" or high-volume, high-cost components reflects common practices aimed at maximizing cost efficiency, as discussed by Monczka et al. (2009).

While recent literature acknowledges the significance of cost savings, there is an increasing emphasis on the importance of supply chain resilience, especially in the wake of global disruptions like the COVID-19 pandemic (Ivanov, 2020; Orlando et al., 2021). Some studies suggest a shift in priorities, with firms placing greater weight on resilience even if it incurs higher costs (Grossman et al., 2023). However, the firm's initial reluctance to adopt dual sourcing solely for resilience purposes indicates that, in practice, cost considerations may still take precedence. The firm's difficulty in implementing dual sourcing purely for resilience, without cost savings, reveals a gap in the literature. Studies like Tukamuhabwa et al. (2015) often assume that firms recognize the strategic importance

of resilience and will adopt necessary measures despite additional costs. However, the firm's experience shows that internal resistance can be significant when cost incentives are absent. This resistance is rooted in the increased workload, complexity, and perceived lack of immediate benefits. This difference could be explained by the fact that the firm's approach reflects real-world constraints, such as internal resistance and the necessity of cost savings to justify new strategies, which may not be entirely captured in theoretical models.

The alignment of the firm's initial incentive with existing literature underscores the persistent importance of cost considerations in sourcing strategies. Despite the growing awareness of supply chain risks, financial incentives remain a dominant factor influencing decision-making. The firm's actions suggest that cost savings are a powerful motivator for change, often preceding considerations of supply chain resilience. This finding indicates that firms may be reluctant to invest in potentially costly and resource-intensive strategies like dual sourcing unless there are clear, immediate economic benefits. The firm's experience reflects a pragmatic approach where cost reduction serves as a catalyst for adopting new sourcing strategies. In this case study, the achievement of cost savings and enhanced supply chain resilience at the same time is almost an unintended yet advantageous outcome, since the initial firm incentive for cost dual sourcing was cost savings. This divergence highlights a potential gap between theoretical recommendations and practical application. It suggests that firms may not prioritize resilience-enhancing strategies despite their recognized importance in the literature.

5.1.2 Combining resilience and competitiveness in glocal sourcing

The firm's adoption of glocal dual sourcing—integrating both global and local suppliers—enables it to achieve both supply chain resilience and cost competitiveness. This strategic approach aligns with the evolving discourse in supply chain management, which emphasizes the need to balance efficiency with responsiveness in sourcing decisions. According to Wu and Zhang (2014), global sourcing is associated with cost efficiency due to lower production and labor costs, while local sourcing enhances responsiveness

through shorter lead times and better communication. By combining these two strategies, the firm leverages the cost advantages of global suppliers and the reliability of local suppliers, effectively mitigating risks while maintaining competitive pricing.

The concept of combining global and local sourcing to capitalize on the benefits of both is supported by Grandinetti and Tabacco (2015), who highlight that integrating local suppliers within a global supply network can create competitive advantages by balancing cost efficiency with increased responsiveness and flexibility. Their study suggests that spatial proximity with local suppliers enhances collaboration and innovation, particularly for complex, customized components. However, while they acknowledge the benefits of such integration, they do not extensively explore how this combination specifically enhances supply chain resilience.

The firm's experience demonstrates that glocal dual sourcing allows it to mitigate risks associated with global sourcing—such as geopolitical uncertainties, longer lead times, and supply disruptions (Holweg et al., 2011; Manuj & Mentzer, 2008)—while still achieving significant cost savings. Since it maintains its relationships with local suppliers, the firm reduces its dependence on single sources and specific regions, while also being able to adapt and respond to disruptions, or sudden customer demands by reallocating its resources accordingly. The flexibility inherent in glocal dual sourcing enhances the firm's ability to environment changes without incurring prohibitive costs associated with entirely local sourcing. This adaptability is essential in a volatile and uncertain global environment, aligning with the need for supply chains to be both efficient and resilient (Christopher & Holweg, 2011).

The firm's strategy also addresses the limitations of single sourcing and multiple sourcing as discussed in the literature. Single sourcing, while beneficial for economies of scale and fostering strong supplier relationships, increases vulnerability to supply disruptions and creates supplier dependency (Burke et al., 2007; Pochard, 2003). Multiple sourcing, on the other hand, adds complexity and administrative burdens due to the need to manage numerous suppliers (Bode & Wagner, 2015). Glocal dual sourcing strikes a balance by diversifying supply risk without introducing excessive complexity, effectively combining the advantages of both strategies.

The firm approach challenges the notion that resilience-enhancing strategies, and especially the ones introducing redundancies, and increasing complexity such as dual sourcing, come at a significant cost or require sacrificing cost competitiveness (Tukamuhabwa et al., 2015). The firm's ability to achieve both objectives simultaneously suggest that, with thoughtful planning and strategic alignment, firms can enhance supply chain resilience without compromising financial performance. This finding diverges from studies that suggest firms must accept higher costs to improve resilience (Grossman et al., 2023), and indicates that hybrid strategies like glocal dual sourcing can offer a more balanced solution if it is thoughtfully implemented. The following section of the discussion will therefore focus on the glocal dual sourcing implementation approach used by the firm to enable cost savings and resilience while minimizing the induced complexities of having to manage two suppliers for one component, one of which being a distant supplier.

5.2 Implementation of glocal dual sourcing

5.2.1 Glocal dual sourcing directionality

The firm's strategy of initiating sourcing with local suppliers and subsequently integrating global suppliers introduces a directional approach to dual sourcing that is not extensively explored in existing literature. This directionality of glocal dual sourcing—from local to glocal— is the key finding of this study as it offers practical advantages in terms of internal alignment, communication efficiency, and balancing cost savings with supply chain resilience.

Initially, the firm collaborated extensively with local suppliers during product development. This approach aligns with the advantages of local sourcing highlighted by Grandinetti and Tabacco (2015), who emphasize that spatial proximity enhances collaboration and innovation, particularly when dealing with complex, customized components. While retaining its local source, the firm then gradually integrated global suppliers into its sourcing strategy, primarily motivated by the potential for cost savings. The firm's approach introduces the novel concept of directionality in glocal dual sourcing

implementation—starting with local suppliers and gradually integrating global suppliers for cost savings, simultaneously creating supply chain redundancies, and hence supply chain resilience (Tukamuhabwa et al., 2015). This contrasts with models where firms might initially engage in global sourcing for cost benefits and consider reshoring or local sourcing in response to supply chain disruptions (Hoek & Dobrzykowski, 2021; Stentoft et al., 2015). The literature suggests that reshoring or adding local suppliers primarily for resilience can be costly and may not be economically justifiable without significant disruptions (Holweg et al., 2011; Hoek & Dobrzykowski, 2021). This study provides empirical support for this claim, showing that strategies aimed solely at creating resilience may face internal resistance unless they also offer cost advantages. This is explained by the fact that managing multiple suppliers increases the complexity and workload of the supply chain, leading to higher supply management costs (Monczka et al., 2009; Bode & Wagner, 2015)

The directionality from local to global sourcing as a deliberate strategic approach is not extensively covered in the literature. Most studies on dual sourcing, such as those by Su and Liu (2014) and Yu et al. (2009), focus on theoretical models assessing optimal sourcing decisions based on factors like cost, risk, and supplier reliability. These models often assume that firms engage with both local and global suppliers simultaneously or choose between them based on a cost-responsiveness trade-off (Wu & Zhang, 2014), without considering the sequential integration of suppliers.

Furthermore, while Grandinetti and Tabacco (2015) discuss the benefits of combining global and local suppliers, they do not explore this combination in dual sourcing strategy. To the best of the author knowledges, the strategic progression from local to glocal sourcing or the internal organizational dynamics involved is not covered in the literature. The firm's experience fills this gap by demonstrating how starting with local suppliers can facilitate internal acceptance and successful integration of global suppliers, ultimately leading to a more resilient and cost-effective supply chain.

5.2.2 Use of sourcing hubs

The firm's strategic use of local sourcing hubs emerges as a prerequisite for the implementation of glocal dual sourcing. This approach facilitates the transition from local sourcing to a glocal dual sourcing model by bridging the gap between the firm and potential global suppliers. The local sourcing hubs, staffed with buyers and quality specialists, play a role in overcoming the challenges of integrating foreign suppliers into the supply chain. It aligns with recognized strategies in the global sourcing literature. Kull and Wacker (2010) emphasize that cultural differences, language barriers, and time zone disparities can hinder effective communication and collaboration with distant suppliers. Establishing a local presence in supplier regions allows the firm to mitigate these challenges. While the literature acknowledges these challenges, the explicit role of local sourcing hubs as a support to transitioning toward glocal dual sourcing is not explored. Jean et al. (2010) suggest that local intermediaries can mitigate cultural and operational barriers, but the firm's practice extends this concept by positioning local sourcing hubs as an enabler for integrating global suppliers.

By deploying purchasing hubs staffed with buyers and quality specialists in low-cost countries, the firm effectively addresses the complexities associated with global sourcing. The local teams are better positioned to identify potential suppliers who meet the firm's technical and quality requirements, which is consistent with Schiele's (2019) emphasis on the importance of thorough supplier evaluation and development in ensuring supplier reliability and performance. The sourcing hubs alleviate cultural misunderstandings and communication barriers, preventing misinterpretations and conflicts—a point noted by Handfield et al. (2009). Additionally, continuous quality monitoring and relationship management are facilitated by the local presence, aligning with Monczka et al. (2009), who stress the importance of supplier relationship management in global sourcing.

The literature acknowledges the challenges of global sourcing and suggests local presence as a mitigation strategy, but there is limited detailed exploration of how firms operationalize this approach. The firm's practical implementation provides insights into the operational effectiveness of sourcing hubs. The firm's sourcing hubs are actively involved

in supplier development, quality assessment, and day-to-day management. This extends the literature by demonstrating the depth of involvement required for effective supplier integration. The firm's experience also shows tangible benefits in terms of cost savings and supply chain resilience, since this approach seems to not only enable the firm to achieve cost savings, but also to enhance supply chain resilience by ensuring reliable supplier performance and effective communication, providing empirical support to the theoretical advantages discussed by Kull and Wacker (2010) and Jean et al. (2010).

5.2.3 Identification of components fit for the glocal dual sourcing strategy

Implementing glocal dual sourcing requires a strategic approach to determine which components are most suitable for this strategy. The firm focuses on components that are critical to production, have high purchase volumes, significant cost implications, or possess characteristics that make alternative resilience strategies less feasible. This targeted approach is essential because resilience efforts can be costly and may be counterproductive if not carefully aligned with the firm's priorities—a notion emphasized by Christopher and Holweg (2011), who advocate for focusing resilience efforts where they matter most.

To prioritize components for dual sourcing, the firm employs the Kraljic Matrix (Kraljic, 1983), a strategic tool that classifies components based on two dimensions: profit impact and supply risk. By categorizing items into non-critical, leverage, bottleneck, and strategic components, the firm can allocate resources efficiently and tailor sourcing strategies to the specific risks associated with each category. This aligns with best practices in supply chain management, as highlighted by Monczka et al. (2009). The firm prioritizes "High Runners"—components with high purchase volumes that represent a the largest portion of purchasing expenditures and that have a significant impact on production processes. Focusing on these components enables the firm to achieve economies of scale, and to mitigate supply chain risks, as recommended by Olsen and Ellram (1997). This approach ensures that resilience efforts are concentrated on items where a disruption would have the most severe consequences.

In addition to volume and cost considerations, the firm evaluates the complexity and technological specificity of components. For complex products requiring specialized technologies, the pool of qualified suppliers can be limited, increasing supply risk (Handfield et al., 2009). Moreover, the time and resources required to qualify new suppliers for such components can be substantial, which makes rapid supplier switching impossible in case of disruptions. Therefore, for these components with long qualification times—such as essential mechanical parts—the firm invests in building strong relationships with both local and global suppliers through glocal dual sourcing. This strategy enhances supply chain resilience by ensuring continuity of a disruption incapacitating one of the two suppliers. Glocal dual sourcing is even more important for these components since alternative resilience strategies like inventory buffering are impractical. Their qualification time combined with their cost would imply non sensible level of safety stock. Christopher and Peck (2004) note that for these types of products, with high obsolescence risk or storage challenges, firms need to explore other strategies. In this case, the firm's adoption of glocal dual sourcing provides an effective solution to enhance resilience without incurring excessive or non practical inventory costs, which is in line with their recommendation.

The academic literature does not extensively discuss the operational challenges associated with the lengthy process of qualifying new suppliers and how this impacts the feasibility of alternative resilience strategies. The firm's practical experience highlights that for components with long qualification times, rapidly switching suppliers in response to disruptions is impractical. Proactively implementing glocal dual sourcing for these items ensures supply continuity, addressing an operational constraint not fully explored in existing studies, which often assume that supplier switching is a viable option given sufficient market availability.

This approach differs somewhat from the literature, which may not fully account for the practical limitations firms face in implementing resilience strategies. The firm's experience underscores the importance of tailoring resilience efforts to the specific characteristics of components, operational constraints, and cost considerations. Moreover, the firm’s experience suggests that when it comes to critical products with lengthy

qualification time, the sole solution available for firms willing to enhance their supply chain resilience is the glocal dual sourcing.

6 Conclusion, Limitations and Directions for further research

Successive shocks—COVID-19 lockdowns, Suez-Canal congestion, trade-war tariffs—have turned large-scale disruption into a routine feature of international commerce rather than an outlier. The academic record, however, still tells us little about how firms can remain globally sourced *and* locally secure at the same time: most dual-sourcing papers are analytical simulations that model two interchangeable suppliers enrolled simultaneously, while the few field studies that combine local and global partners stop short of examining resilience pay-offs. Against that backdrop, this single-case study traced how a Swiss pump manufacturer operationalised glocal dual sourcing and how the practice balanced cost discipline with risk hedging.

Cost saving—not resilience rhetoric—proved to be the decisive trigger, echoing the persistent primacy of price competitiveness reported in earlier sourcing research. Managers adopted a local-first, global-second sequence: a proximate supplier was involved during product development to stabilise specifications, after which a lower-cost Asian partner was qualified for volume production. That directionality, largely absent from existing models, reduced engineering re-work and internal resistance. Selectivity mattered just as much as sequence. Dual sourcing was limited to "strategic" items in the Kraljic matrix—high value, long qualification components where redundancy is almost mandatory—while simpler parts remained single-sourced with inventory buffers. Regional purchasing hubs in Asia, an approach noted by Koerber and Schiele (2021) in post-COVID sourcing reviews, absorbed much of the additional coordination load by vetting factories, bridging cultural gaps and negotiating in local languages. Interviewees described the configuration as yielding a clear two-fold benefit: the domestic supplier acts as a buffer when disruption threatens, while the overseas partner keeps day-to-day input costs in check—thus maintaining the firm's price competitiveness even as its risk exposure is reduced.

These insights enlarge the literature by showing that the *timing* of supplier enrolment and the *targeted* deployment of redundancy are critical design levers seldom captured in formal models. Practically, they suggest a staged roadmap: pilot locally to lock the

design, add a vetted global partner for cost, staff regional hubs to manage complexity and confine dual sourcing to items where failure is most costly.

The study's depth comes at the cost of breadth. Anchoring the analysis in a single firm limits statistical generalisability, though analytic transfer is possible following Yin's (2018) case-study logic. Interview data, even when triangulated, remain vulnerable to informant bias; confidentiality assurances and member-checking mitigated but did not eliminate that risk. A cross-sectional snapshot cannot reveal how the dual-sourcing mix might evolve as exchange rates or hazard frequencies shift, and the case industry's long qualification cycles differ from fast-fashion or consumer-electronics clockspeeds.

Future work could expand the canvas. Comparative cases across industries with shorter product lifecycles would test whether the local-first pathway travels well. Longitudinal studies could track how glocal portfolios expand or contract as new shocks occur. Decision-support research might feed real-time capacity data, transport reliability indices and geopolitical indicators into order-allocation algorithms, while behavioural studies could unpack how purchasing mediates the inevitable trade-offs with R&D and quality teams. Finally, the cost-and-resilience lens could be widened to include sustainability targets, digital traceability and innovation speed, assessing whether glocal dual sourcing advances or compromises those emerging priorities.

In sum, the case shows that firms need not choose between the efficiency of long-haul procurement and the security of proximity. When dual sourcing is rolled out directionally—local first, global second—and applied selectively to the items where redundancy matters most, managers can hedge uncertainty without surrendering the economic gains of globalisation. The art lies not in balancing two suppliers on day one but in staging their involvement so that each delivers value at the point in the product life cycle when that value is most needed—a practical lesson for an era in which disruption is the background condition of international trade.

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