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Glocal sourcing: How to Combine Global and Local Sourcing

A multiple case study within the FMCG industry

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Foreword

I would like to express my deepest appreciation to Prof. Constantin Blome, my thesis supervisor for his support, advice, valuable feedback, and encouragement in the process of writing this paper.

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1 Introduction

The first wave of global sourcing started in the 1980s, companies found the advantage to move their manufacturing sites to China, Central and Eastern Europe, and Mexico to reduce labor costs. After that, there was another wave of global sourcing in the early 1990s, companies moved their information technology function to India and Ireland, obtaining skilled programmers and cost reduction. However, the benefits of global sourcing are more than just cost savings, there are other perks such as better quality, the introduction of competition to the domestic supply base, establishing a presence in a foreign market, satisfying offset requirements, and increasing the number of available sources, etc (Monczka & Trent, 1991).

Despite all the benefits, global sourcing comes with some risks and drawbacks. For instance, the extended material pipelines, longer material ordering lead time, relying on new and unfamiliar sources of supply, and total costs that may far exceed unit costs. As the result, companies are increasingly adopting strategies that combine both global and local sourcing, namely glocal sourcing, in their business practices. The idea will be further introduced in this paper, and in order to achieve optimal profit, the right balance between global and local sourcing is aimed to be identified.

The structure of this paper is laid out as follows: firstly, a literature review is conducted to understand the previous research on global and local sourcing strategies. An analysis of the industry is conducted to further understand the business reality of the FMCG industry and its general sourcing strategy in accordance with the research questions. Secondly, a case study research method has been adopted, and the research questions are raised based on Fisher's nature of demand theory (1997), which suggests that the different characteristics of a product's demand should adopt different sourcing strategies; and Jin's proposition - Cost and agility: the combined effect (2004), which states although global sourcing lowers the production costs, the supply chain needs to bear the higher inventory-holding costs and the risk of supply uncertainty. There's a trade-off between cost and agility. Thirdly, in order to answer the raised research questions, a multiple case study is conducted, five multinational enterprises (MNEs) companies in the FMCG industry are selected on their size and globalization level. Lastly, a cross-case analysis is conducted. A general comparison between the five case studies is made, it gives an explanation and description of how the business reality is compared to the theoretical propositions.

2 Literature Review

2.1 Global and Local Sourcing rationale, drivers

Some scholars differentiate the terms “international purchasing” and “global sourcing”, however, most people working in industry interchange them (Trent & Monczka, 2005). Nevertheless, there are differences that exist between the two terms; International purchasing means a commercial transaction between a buyer and a supplier located in different countries. On the other hand, global sourcing represents integrating and coordinating common items, materials, processes, technologies, designs, and suppliers across worldwide buying, design, and operating locations (Trent & Monczka, 2005). As the two academic terms are not widely differentiated by the industry, and in order to maintain simplicity, it is considered the two terms identical in this paper.

Global sourcing has been an important strategy in the past few decades, especially for MNEs, to gain a competitive advantage (Monczka & Giunipero, 1984). Table 1 indicates the recent three waves of global sourcing in the 1980s, early 1990s, and early 2000s (Kotabe et al., 2009). Purchasers report spending approximately 60 percent more dollars overseas in 1981 than in 1977. Moreover, the electronics and transportation industries spent a larger portion of their purchasing dollars internationally in 1981 than other industries (Monczka & Giunipero, 1984).

Table 1: Recent Waves in Global Sourcing

	FIRST WAVE (SINCE 1980S)	SECOND WAVE (SINCE EARLY 1990S)	THIRD WAVE (SINCE EARLY 2000S)
TYPE OF ACTIVITY SUPPLIERS	Manufacturing China, Central and Eastern Europe, Mexico, and others	Information technology India, Ireland, and others	Business processes India, Pakistan, South Africa, and others
TYPE OF FIRMS	Manufacturing	Manufacturing, banks, and others	Financial services and services more generally
PRIMARY MOTIVES	Reduce in labor cost	Obtaining enough skilled programmers and cost reduction	Reduction in labor costs and round-the-clock service provision

SOURCE: KOTABE ET AL. (2009)

Based on the research findings of Birou & Fawcett (1993), the most important factors to succeed in global sourcing are Top management support; Developing communication skills; Establishing long-term relationships; Developing skills unique to international sourcing. Nevertheless, Trent & Monczka (2005) has a similar result as Executive commitment to global sourcing; Rigorous and well-defined processes; Availability of needed resources; Integration through information technology; Supportive organizational design; Structured approaches to communication; Methodologies for measuring savings.

2.1.1 Global sourcing drivers

One of the first articles to address international purchasing is Davis' article in Harvard Business Review, which identifies the factors that determine the scope of global sourcing. Buyers consider product categories, the distance between buyer and supplier, nationalism, market versus product pressures, characteristics of the supply industry, and characteristics as the important factors affecting the choice of an international versus a domestic supplier (Davis, 1974). Monczka and Giunipero (1984) stated that price, quality, and availability are noted to be the main factors that influence companies to change their strategy to global sourcing.

(1) Cost Saving

Cost reduction has been considered a prominent strategic goal of global sourcing (Kotabe et al., 2008). Global sourcing's competitive value has increased because the value of purchased items as a percentage of the Cost of goods sold (COGS) has raised in many production settings. The savings associated with global sourcing of approximately 20 to 30% may be available (Khan & Yu, 2019). Cost differences between countries are found due to the following reasons: Different productivity levels; Lower labor rates; Agreement to accept a low profit margin; Government subsidies; Differences of exchange rate; Lower-cost input for materials (Khan & Yu, 2019).

It's clear that sourcing decisions play an important role in determining the firm's relative cost structure (Birou & Fawcett, 1993), and a cost reduction program is especially crucial for firms active in mature markets where there is little or no product differentiation. To dive deeper, Trent & Monczka's (2003) research shows that firms successfully implement global sourcing strategies are able to achieve a material cost saving of an average of 15 percent, in comparison to local or regional sourcing practices.

(2) Quality

Even though cost-saving is reported as the primary reason that drives firms to explore global sourcing, quality and availability are viewed as more important decision criteria in today's competitive environment (Birou & Fawcett, 1993). For example, Philip Crosby notes that up to 50 percent of a firm's quality problems can be traced to defective purchased materials (Birou & Fawcett, 1993).

(3) Access to Resources

Global sourcing enables firms to utilize worldwide resources to obtain value-added processes by allowing them to grow out of regional economies or comparative advantage factors in the home country, e.g., raw materials, products, and technologies that are not available at home (Birou & Fawcett, 1993) (Kotabe et al., 2009).

Procurement, which often works together with engineering, marketing, and new product development, gradually takes on the responsibility of identifying new technology that can differentiate its final products and services from the competition (Trent & Monczka, 2003). The availability or location of product and process technology could influence global sourcing decisions, especially in high-technology industries (Trent & Monczka, 2003).

Other drivers for global sourcing include (4) the introduction of competition to the domestic supply base, (5) establishing a presence in a foreign market, and (6) reacting to the offshore sourcing practices of competitors (Monczka & Trent, 1991). The reasons for a firm to change its strategy to global sourcing may be different, but the major drivers are consolidated in Table 2.

Table 2: Advantages of Global Sourcing

Monczka and Trent (1991)	Ettlie and Sethuraman (2002)	Nassimbeni (2006)
- Cost reduction - Quality improvements - Increased exposure to worldwide technology - Delivery and reliability improvements - Introduction of competition to the local supply base - Establishing a presence in a foreign market - Satisfying offset requirements - Increase the number of available sources - Reacting to the offshore sourcing practices of competitors	- Cost savings by EDI technology - Greater access to new technologies and emerging markets - Better quality - Higher speed and flexibility	- Purchase materials and components at lower costs - Achieve resources not available in the home country - Possibility of acquiring less expensive manpower - Global competition - Global attitudes of the company - Possibility of acquiring advanced technologies - Reduction of commercial barriers - Possibility of developing a presence on foreign markets - Presence of plants in foreign countries - Possibility of selling products on supplying market - More favorable taxation

Source: Kotabe et al. (2009), Ettlie & Sethuraman (2002)

2.1.2 Local sourcing drivers

Local sourcing refers to the sourcing of products from the domestic market, while regional sourcing is defined by Jin (2004) as the sourcing that is made in countries close to the domestic market. This paper focuses on global versus local sourcing for the purpose of simplicity, however, regional sourcing is included in the scope of local sourcing.

From the Five Levels of Sourcing framework (Trent & Monczka, 2005), we can understand that local sourcing is usually set to be the “default” sourcing process if no further strategies are implemented, or a reshoring phenomenon at level six after experiencing global sourcing expansion. It's interesting here to discuss why the firms either (1) maintain local sourcing even when there's an opportunity to progress to global sourcing or (2) return to local sourcing after having experienced global sourcing.

There are four major drivers of local sourcing listed below, a. Local Clusters and b. Long-term Relationships with Subcontractors can explain questions (1) why firms maintain local sourcing even when there's an opportunity to progress to global sourcing; and c. Less Additional Cost and d. Quick response to Demand Uncertainty provides a reason to question (2) firms return to local sourcing after having experienced global sourcing.

a. Local Clusters

Porter defined clusters as "geographic concentrations of interconnected companies and institutions in a particular field" (Porter, 1998). Clusters consist of linked industries and other entities to create a competitive community. Compared with market transactions with buyers and sellers at a distance, their proximity in one location boosts great coordination and trust. Local clusters could reduce the problems with suppliers resulting from arm's-length relationships. It doesn't have to impose a concrete vertical integration or maintain formal relationships with suppliers such as networks, alliances, or partnerships (Porter Michael E., 1998).

A local cluster linked companies independently and informally, and it provides several advantages, such as better efficiency, effectiveness, and flexibility. Members of a cluster give companies the benefit to operate more productively in sourcing, accessing information, technology, etc. A well-developed cluster offers a connected and targeted supplier base. Sourcing locally instead of from distant global suppliers not only lowers the transaction costs but also minimizes the need for a large amount of inventory, further reducing importing costs and delays (Porter Michael E., 1998).

b. Long-term Relationships with a Subcontractors

Even if the firms don't belong to a local cluster, there is another driver that keeps firms maintaining their local sourcing strategy. Jin proposes that" the higher the long-term relationships with subcontractors a firm has, the higher the portion of domestic sourcing" (Jin, 2004). The firm can save transaction costs or other costs related to inventory and delivery based on mutual trust.

c. Less additional cost

Even though cost-saving is often the primary reason for firms to move toward global sourcing, Monczka and Trent's (2005) research shows that indeed 25% of the unit cost reduction is obtained thanks to global sourcing, however, the reduction is sometimes absorbed by the extra costs incurred by handling international contracts. It demonstrates that global sourcing does not always promise cost-saving.

d. Quick response to demand uncertainty

Uncertainty of demand is intrinsic to innovative products and not limited to them. Firms can avoid uncertainty by sourcing locally to reduce lead-time and increase the supply chain's agility so that it can start the manufacturing at a later time, when the demand can be accurately forecasted (Fisher, 1997). Local supply chains are seen to be more agile and responsive, which can be a great advantage under periods of demand fluctuations (Jin, 2004).

One example from Shepheard-Walwyn (1997), states for the apparel industry, developing countries would be suitable sourcing locations for the commodity-low fashion category, however, local sourcing would be preferable for high fashion goods which have greater uncertainty, requires short-run production, on-time delivery, and immediate response to demand fluctuation (Shepheard-Walwyn, 1997).

2.2 Global sourcing risk and drawback

All the organizations are exposed to risks, and particularly in a global supply chain environment, firms are exposed to a more complex and uncertain environment than others for several reasons.

From a global sourcing perspective, risk increases could be due to several reasons: the extended material pipelines, longer lead time, new and unfamiliar sources of supply, and TCO may far exceed unit costs (Trent & Monczka, 2003). Managing different currencies, languages, and business practices also creates complexity compared to local sourcing (Trent & Monczka, 2003). Kotabe & Murray (2009) have a similar finding- Logistics, inventory management, distance, nationalism, and lack of working knowledge about foreign business practices, are the major problems of global sourcing that MNEs encounter (Kotabe et al., 2009).

It can be risky that some firms to consider international sourcing as a shortcut to achieve short-term cost advantages without taking a longer-term perspective of developing a sustainable competitive advantage (Murray, 2001; Trent & Monczka, 2003). It is acknowledged that companies with cost-saving purposes should carefully review the total cost of ownership (TCO), especially since transaction costs could vary significantly, rather than the simple purchasing cost (Ellram, 1995), and there are also hidden costs associated with longer cycle times, increased administrative and budget costs (Trent & Monczka, 2003), quality problem and increasing inventory requirements. Rangan (2000) discusses this situation as the costs of ‘‘search and evaluation.’’

Keeping inventory levels low is another difficult task faced by firms with strategies toward global sourcing. Given longer and variable lead time, firms may decide to keep higher inventory levels to avoid stock-outs and disturbance in production compared to local sourcing (Stanczyk et al., 2017). Overall, global sourcing can actually result in a cost increase if TCO is taken into consideration.

The disadvantages of global sourcing proposed by Kotabe et al. (2009) are shown at Table 3.

Table 3: Disadvantages of global sourcing

- Have to deal with foreign institutions such as legal differences
- Have to deal with foreign cultures which could affect communication
- Have to deal with foreign languages which could affect communication
- Need to pay import duties where applicable
- Increased transportation costs and supply chain uncertainty
- Forward integration by foreign suppliers, patent infractions possible
- Negative effects on employee commitment and legitimacy at home base
- Reliance on independent suppliers, and decreased ability to keep abreast of emerging technical requirements

Source: Kotabe et al. (2009)

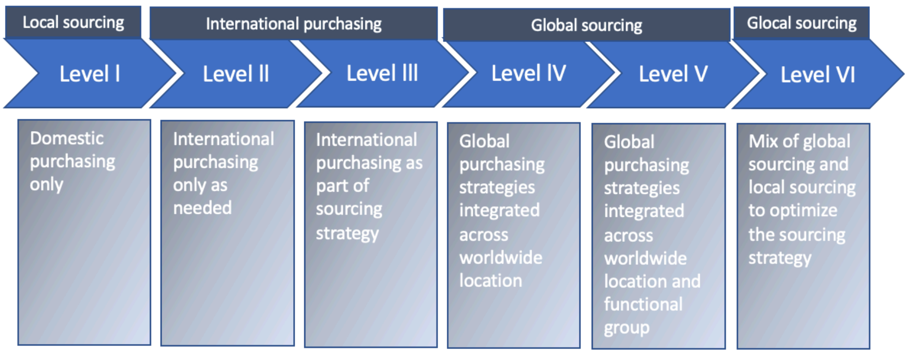
2.3 Five Levels of Sourcing

From the Five Levels of Sourcing (Trent & Monczka, 2005), it’s clearly shown the sourcing progression through time. Level I indicates firms that practice only local purchasing, and they progress toward international purchasing at Level II because they may face problems such as no suitable local supplier or finding their competitors are gaining a competitive advantage due to changing sourcing practices. Firms start including international purchasing as part of their sourcing strategy at Level III after realizing that purchasing internationally leads to performance improvements.

At Level IV, it is primarily strategy integration within buying locations and mainly focuses on the development of global sourcing agreements. At Level V, firms’ integration and coordination happen not only within worldwide buying locations but also across functional groups. This integration often involves the coordination of design and procurement activities, moreover, it works on standardizing the worldwide supply management processes.

This framework clearly explains that sourcing practice evolves from local to global, it can be a lengthy process and requires firms to keep up with the trend to receive a competitive advantage. Moving from one level to another takes extra resources and expertise to accomplish, and it may also suggest that larger firms can more easily develop and progress their sourcing function. However, this framework seems to suggest that firms should only move in the direction of the next level and left out the fact that there are some significant drawbacks of global sourcing. Therefore, one could add an improvement at the fifth level where firms would shift from this global focus to also incorporate the benefits of local sourcing in their sourcing strategy. This would introduce a sixth level to the framework – "glocal sourcing", its concept is that firms would optimize sourcing strategy by combining global and local sourcing (Bonchoux, 2020). This new framework proposition of the Six Levels of Sourcing is shown in the following Figure 1, and it will be elaborated in section 2.4.

FIGURE 1: THE SIX LEVELS OF SOURCING



SOURCE: THE FIRST 5 LEVELS ARE FROM MONCZCA & TRENT (2005) P.28

2.4 Glocal: a combination of global and local sourcing

Following the Six Levels of Sourcing shown in section 2.3, here we discuss more in-depth "glocal sourcing". As firms are increasingly adopting strategies that combine both global and local sourcing, namely glocal sourcing, in their business practices. To achieve optimal profit, it is crucial to meet the right balance between global and local sourcing. However, this subject receives little attention from researchers, and the parameters to reach the right balance remain unclear.

Therefore, here we discuss three theories each proposed by Fisher (1997), Jin (2004), and Kotabe (2009), in an attempt to find the factors that could determine the optimal balance.

2.4.1 Nature of demand

Whether to develop a global, local, or mixed sourcing strategy, Fisher (1997) suggests that it depends on the characteristics of a product's demand, and demand varies by the product itself and by the stability of demand by the stock-keeping-unit (SKU). Fisher (1997) classifies products by demand patterns: (1) functional products in which the demand is predictable or (2) innovative products in which the demand is unpredictable. The differences in demand between the functional and innovative products are summarized in Table 4.

To reach an optimal result, the supply management must be designed to meet each type of demand – The functional products require a physically efficient process and innovative products require a market-responsive process. For innovative products, due to the great economic gain from reducing stock-outs and excess inventory, the firms should work on increasing market responsiveness to reach the desired efficiency. The two processes by product category are presented in Table 5.

Fisher's concept can be applied to combining local and global sourcing. For instance, a firm could apply global sourcing to mature products and local sourcing to new-introduced innovative products.

TABLE 4: ASPECTS OF DEMAND FOR FUNCTIONAL AND INNOVATIVE PRODUCTS

Aspects of demand	functional products	innovative products
Product life cycle	More than 2 years	3 months to 1 year
Contribution margin*	5% to 20%	20% to 60%
Product variety	Low (10 to 20 variants per category)	High (often millions of variants per category)
Average stockout rate	1% to 2 %	10% to 40%
Average forced end-of season markdown as percentage of full price	0%	10% to 25%
Lead time required for made-to-order products	6 months to 1 year	1 day to 2 weeks

SOURCE: FISHER (1997)

TABLE 5: PHYSICALLY EFFICIENT VERSUS MARKET-RESPONSIVE PROCESS

Aspects of supply	Physically efficient process (functional products)	market-responsive process (innovative products)
primary purpose	Supply predictable demand efficiently at the lowest possible cost	Respond quickly to unpredictable demand in order to minimize stockouts, forced markdowns, and obsolete inventory
Manufacturing focus	Maintain high average utilization rate	Deploy excess buffer capacity
Inventory strategy	Generate high turns and minimize inventory throughout the chain	Deploy significant buffer stocks of parts or finished goods
lead-time focus	Shorten lead time as long as it doesn't increase cost	Invest aggressively in ways to reduce lead time
approach to choosing suppliers	Select primarily for cost and quality	Select primarily for speed, flexibility, and quality
product-design strategy	Maximize performance and minimize cost	Use modular design in order to postpone product differentiation as long as possible

SOURCE: FISHER (1997)

Abernathy (2000) has a similar proposition, he suggests moving low-volume, high-variance SKUs to stay close to markets while producing most high-volume, low-variance goods offshore where it is more cost-effective (Abernathy et al., 2000). The mixed allocation of sourcing contributes to the highest profits while reducing exposure to total inventory risk (Abernathy et al., 2000b).

2.4.2 Cost and agility: the combined effect

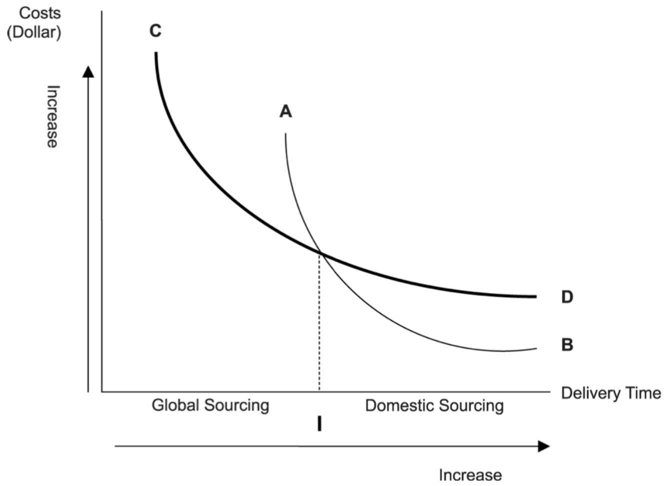
Bucklin (1965) first explained the logic of postponement is the late differentiation (form, place, and time) of goods in manufacturing and logistics operations. Bucklin (1965, p.27) states, “savings in costs related to uncertainty would be achieved by moving the differentiation nearer to the time of purchase,” when the demand supposedly would be more predictable. However, the postponement doesn’t just bring benefits, it also increases certain risks in the supply chain, such as the risk of lost sales.

The concept opposite of postponement is speculation, which holds that “changes in form and the movement of goods to forward inventories should be made at the earliest possible time in the marketing flow to reduce the costs of the marketing system”(Bucklin, 1965, p.27). By changing it to the earliest point, speculation makes it possible to gain economies of scale by placing large orders at once, reducing the costs of sorting and transportation, and lowering the risk of stockouts. Speculation shifts the uncertainty and thus, it is a more manageable and predictable risk (Bucklin, 1965).

Although global sourcing lowers the production costs due to the low wages and economies of scale, the supply chain needs to bear the higher inventory-holding costs and the risk of supply uncertainty. On the other hand, domestic sourcing is a more agile supply chain, and it can lower inventory costs but higher production costs. There’s a trade-off between cost and agility, many firms are combining global and domestic sourcing to minimize it (Jin, 2004).

According to Bucklin’s (1965) conceptualization of combined principles, Figure 2 illustrates how the postponement-speculation principle can be applied to find the optimal balance of global and domestic sourcing. Even though firms source globally for many reasons as discussed in section 2.1.1, here Bucklin assumes that cost-saving is a primary reason for global sourcing and that firms cannot predict the exact demand.

FIGURE 2: TRADE-OFF BETWEEN AGILITY AND COST



SOURCE: JIN (2004)

In Figure 2, two curves show the delivery of goods at longer or shorter delivery times, and with the shorter delivery time, the intermediate inventory is necessary. The curve CD indicates the case of global sourcing with speculative inventory, and the curve AB indicates the case of domestic sourcing without using speculative inventory. The cost includes the total costs incurred from production to delivery of goods, such as unit production cost, inventory handling, storage, transportation, etc. Agility is demonstrated by delivery time from suppliers to customers.

The cost of using only global sourcing (CD) will be higher than using domestic sourcing (AB) as the delivery time increases because of extra the cost associated with speculative inventory. As a result, CB indicates the minimum average cost that could possibly reach by either using global or domestic sourcing. The ideal point, I, is where optimal cost and agility can be achieved through the combination of global and domestic sourcing.

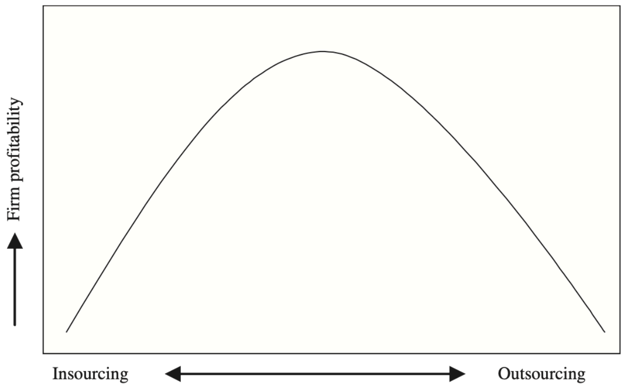
2.4.3 Kotabe's balance and fit perspectives

2.4.3.1 A "Balance" Perspectives

Kotabe (2009) explains the global sourcing levels and how they relate to the performance of the two complementary perspectives of ''balance'' and ''fit.''
A "balance" perspective can help determine the optimal point between sourcing strategy and performance relationship. Kotabe and Mol (2004, 2006) argue that firms' sourcing strategy is to outsource all problematic activities run, such as a lack of innovation and bargaining power, or an inability to distinguish itself from competitors. However, on the other hand, firms that only source locally fail to better utilize the incentives supplied by

markets, and it leads to bureaucracy and inefficiency. Thus, it's important to find the balance between outsourcing and local sourcing to reach optimal performance (Kotabe et al., 2009).

FIGURE 3: A CURVILINEAR RELATIONSHIP BETWEEN THE DEGREE OF OUTSOURCING AND FIRM PERFORMANCE



SOURCE: KOTABE ET AL (2009)

The ''balance'' perspective can be summarized as: "Some activities are best outsourced globally while others ought to be integrated (from a performance perspective)" (Kotabe et al., 2009, p 267). Optimal performance can be reached when activities are balanced outsourced and/or integrated. The pattern produced by this situation is an inverted U-shaped relationship between outsourcing and performance, with the top of the curve representing the optimal performance. The idea is visualized in Figure 3.

2.4.3.2 A "Fit" Perspectives

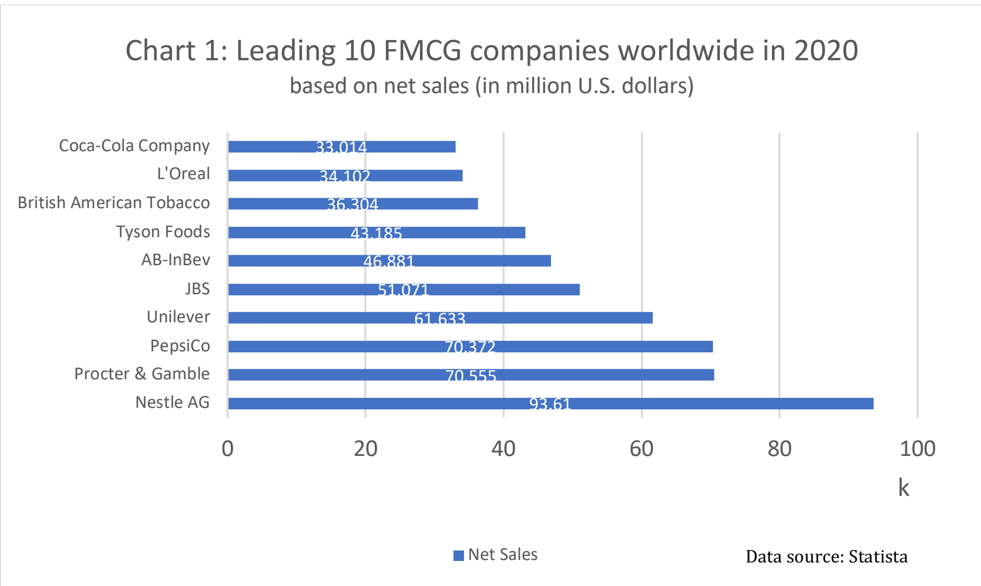
Some firms or scholars fail to include environmental factors in examining the sourcing strategy and performance relationship, they may ignore the effects of different environment settings on optimal sourcing strategies. As a result, Kotabe (2009) next introduces the ''fit'' perspective of the environment–strategy–performance relationship. Specifically, with the low levels of product innovation or technological uncertainty, the use of outsourcing of major components is positively related to market performance. However, with the higher levels of product innovation/technological uncertainty, the outsourcing and performance relationships become negative.

The "fit" perspective can be summarized as: "There is a range of contingency factors (i.e., capital intensity, degree of service inseparability, market uncertainty, transaction frequency) at the transaction-, firm- and context-levels" (Kotabe et al., 2009, p 270). These factors determine how much global outsourcing should be part of the sourcing strategies from a performance perspective. "Fit" can be achieved when the actual global outsourcing level is aligned with the predicted level based on the contingency factors. If a firm matches an outsourcing decision to the relevant contingency factors, the resulting strategic fit helps achieve better performance (Kotabe et al., 2009).

2.5 Industry analysis

The term ‘fast-moving consumer goods’ refers to products having low unit value, requiring fleeting less loyalty, impulse buying, and low involvement by consumers. The FMCG industry has a history of generating growth through mass brands. The FMCG industry had created 23 of the world’s top 100 brands by 2020 and had grown total return to shareholders by almost 15 percent a year for 45 years (Greg et al., 2018). Chart 1 shows the net sales of the top 10 FMCG companies in the world in 2020.

It’s recognized that the FMCG firms pioneered and executed well the five-part model for creating value (Greg et al., 2018). Firstly, it created mass-market brand building and product innovation, and it led to reliable growth and gross margins that are roughly 25% above non-branded players. Secondly, it built strong relationships with retailers that provide advantages and direct access to consumers. By tightly aligning the supply chains with retailers, the FMCG firm successfully secured distribution as their partners grew. Thirdly, it engaged with developing markets early and actively cultivated their categories. It is a tremendous source of revenue growth. Fourthly, it designed its operating models with a consistent execution cost reduction plan. Most FMCG firms have implemented a centralized model in order to continue pushing costs down. Finally, it used M&A to consolidate markets and create a basis for organic growth post-acquisition. Firms update their portfolios with new brands and categories, these companies applied their superior distribution to grow those new brands and categories (Greg et al., 2018).



The supply chain management in the FMCG industry shows great complexity, and it's usually driven by a large number of facilities and product portfolios, and the resulting flows through inter-organizational and international networks comprising suppliers, manufacturers, distributors, retailers, and service providers (Mukhopadhyay and Barua 2003). The impacts of shelf availability and out-of-stock situations in the FMCG industry are evaluated and discussed by Corsten and Gruen (2003). The complexity, demand uncertainties, and dynamics are analyzed by Wong et al. (2005) in a longitudinal Supply Chain study of toy manufacturers and retailers. Today's complex and volatile FMCG environment requires businesses to seek solutions through agility and responsiveness, a rejection of the principles of mass manufacturing (Lowson, 2001).

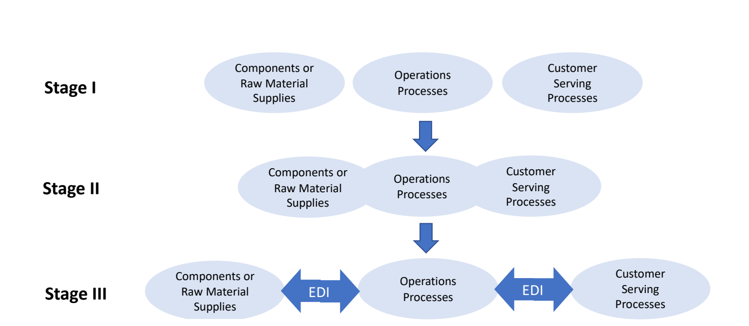
2.5.1 FMCG industry system evolution model

Lowson conducted empirical research in 2001 and he developed an FMCG industry system evolution model. The FMCG environment today is complex and volatile, and it requires businesses to design and implement greater product and process variation through agility and responsiveness. This goal can only be reached when the whole supply chain is completely integrated, data is real-time shared, and individual products can always be tracked (Lowson, 2001).

Figure 4 shows Lowson's evolution model of a supply system pipeline for Fast Moving Consumer Goods industries. Stage 1 shows the situation at the turn of the last century, the participants considered themselves are separated and autonomous industries with no influence or interconnection with one another. For example, upstream suppliers provide components, raw materials, or services, and other firms would then provide operations processes such as manufacturing and assembling. In the final stage, those organizations serving the customer (retailers, service providers, etc.) would offer goods and services to the end customer. This business operation has prevailed for some time and directly led to stock holding, duplication, and other non-value-adding activities.

Stage 2 shows the time of mass production becoming the norm and the rise of retail power. Interdependence is now recognized, and the supply chain is starting to be attempted to cooperate with upstream and downstream. However, the FMCG industry remains focused on manufacturing and product-driven with little consideration for consumer preference or demand. Stage 3 is the current situation, theoretically, with Electronic Data Interchange (EDI) as an interface between sectors in the pipeline between consumers and the retailer or service provider.

Figure 4: FMCG Supply System Evolution Model



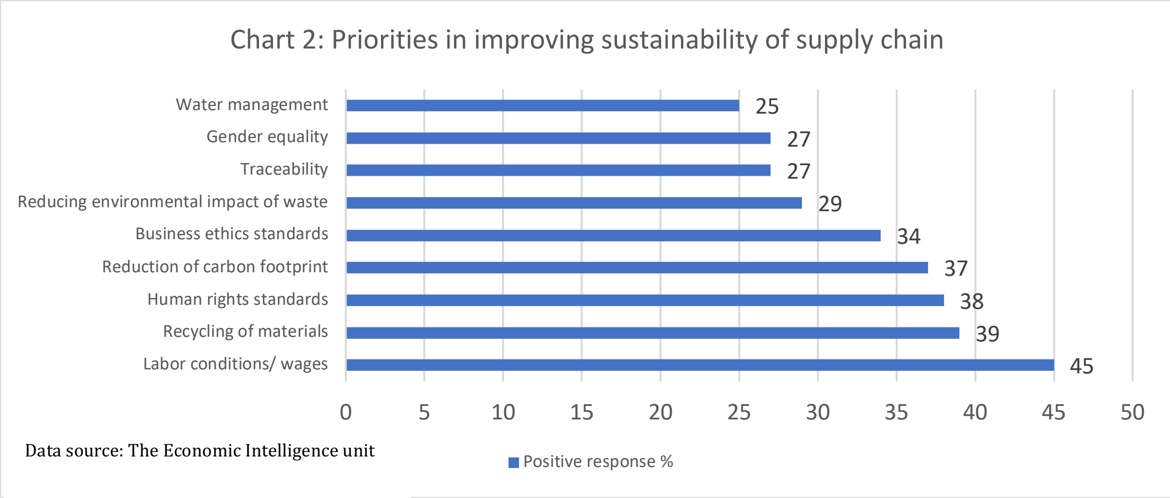
Source: Robert H. Lowson 2001

2.5.2 Sustainability

The consumer goods industry has generated considerable societal and environmental footprints (Bocken and Allwood, 2012), and there is an increasing pressure on FMCG companies to opt for more sustainable business models (Ashford and Hall, 2011; De Medeiros, Ribeiro, and Cortimiglia, 2014). The innovation ranges from greener products and packaging to new modes of consumption through service-based models, and to changes in sourcing and logistics (e.g. Bocken et al., 2014; Boons and Lüdeke-Freund, 2013).

To take packaging for instance, FMCG firms put great efforts into packaging innovation: light-weighting, materials reductions, recycling, and waste initiatives programs are launched to re-evaluate the approach to innovation and cost-effective use of materials (Neil Farmer, 2013). Unilever had become a zero-landfill manufacturer in the UK in 2011, including its 11 sites not sending any non-hazardous waste to landfills. Procter & Gamble had also created a Sustainability Vision. It pledged to reduce packaging by 20% by 2020 and to reduce its use of petroleum-derived materials by 25%. Ultimately, it plans to make 100% of its products and packaging with renewable or recycled materials. The Coca-Cola company integrated its existing sustainability initiatives in the areas of water, climate protection, packaging and recycling, and community. Nestle announced that it claimed to be the UK's lightest-weight water bottle in 2011, with 25% fewer materials than before (Farmer, 2013). It all started out as material reduction programs across major consumer goods producers has now led to a global drive to save and replenish the world's natural resources.

A study by The Economist ranked labor conditions and wages as the top priority of the sustainability issues within FMCG supply chains. The result included the data across three continents shown in Chart 2; however, the figure conceals the difference between how labor issues between continents.

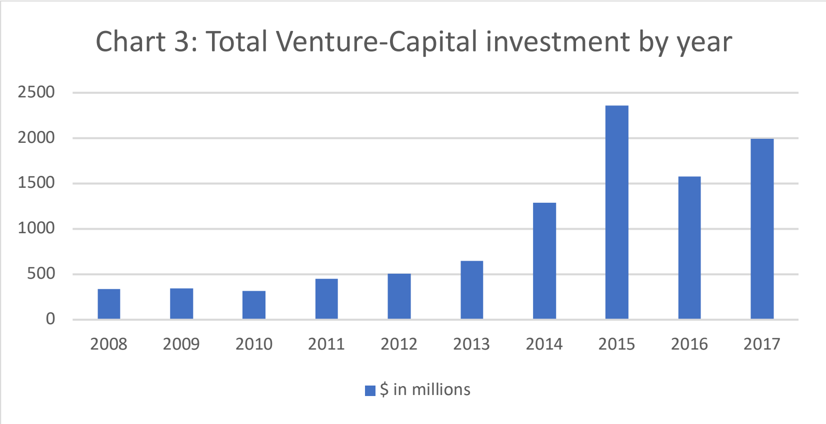


2.5.3 Trends and Challenges of the FMCG Industry

Despite the fact that the FMCG industry has been successful for a few decades, the growth has been weak, with large companies only growing at 55% of GDP (Greg et al., 2018). Mckinsey listed 10 disruptive trends in the FMCG industry, and the following shows the major trends with a very high impact on the industry. First, digital has changed consumer behavior and how they learn and engage with brands, and at the same time, how companies learn and engage with their consumers. The marketing strategy and mass channels in the past are no longer effective. Digital-device penetration, the IoT, and digital profiles increase the volume of data collected nowadays. Most FMCGs have started to develop their digital capabilities but still have a long way to go, especially in using the data to adopt marketing and sales practices.

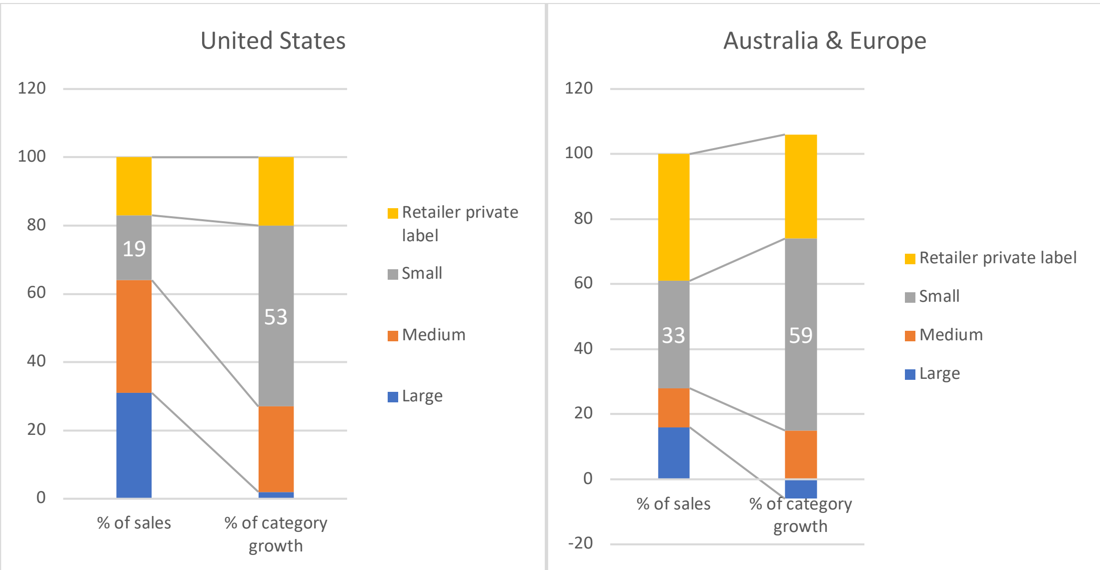
Second, there's a trend of explosive growing numbers of small brands - many small FMCG companies meet millennial preferences and catch the trend of digital marketing to grow fast. These brands are not easy to spot because they are often sold online or not in traditional channels. However, these small companies caught the attention of Venture Capitalists (VCs). More than 4,000 small companies received $9.8 billion of venture funding over the past ten years as shown in Chart 3, and to be noted, $7.2 billion of it in the past four years alone. Moreover, the VCs are not the only ones noticing these emerging small FMCG companies, the retailers have also noticed them. According to The Nielsen Company, US retailers are giving small brands more space for new listings. The reason is shown to be that retailers want small brands to differentiate their proposition against their competitors and to drive their margins up, as these small brands tend to be premium and rarely promote. Therefore, as shown in Chart 4, small brands are two to three times their fair share of growth while the larger brands remain flat or in slight decline.

The value chain of the FMCG industry that is easy to outsource makes it easier for digital players to get started and scale. Besides, the low shipment costs as a percent of product value and the low regulatory barriers make the barrier for new entrants into the industry low.



Source: Greg et al (2018)

<u>Chart 4:</u> FMCG industry share of sales and of growth, 2016-2017

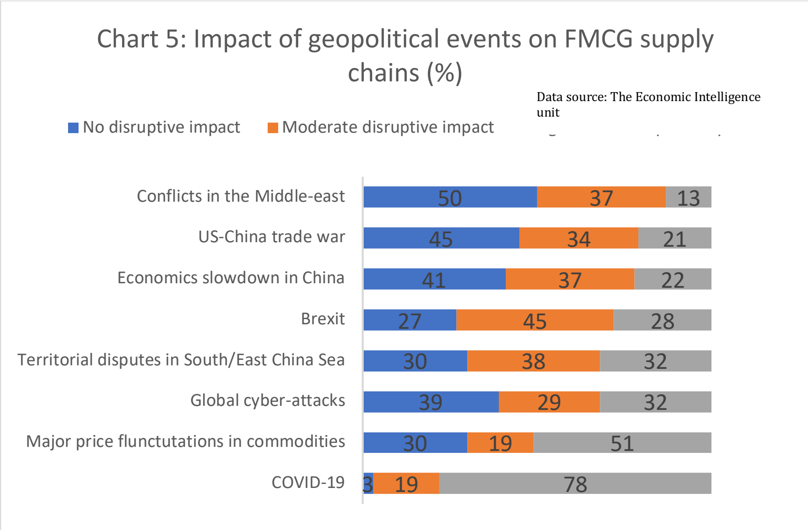


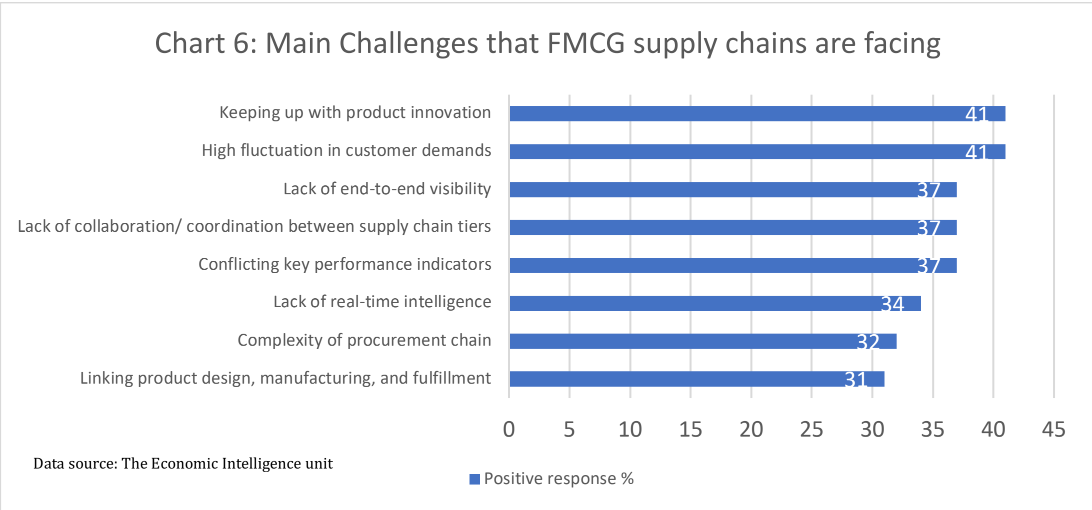
"Large" refers to the top 16 companies, "medium" to the next 400 companies, and "small" to the remaining companies.

Source: Retail Measurement by The Nielson Company

The challenges of the FMCG industry consist of two parts – the external market challenges and the internal organizational challenges.

The Economics survey asked about the biggest external challenges one faced, the result is shown in Chart 5. Excluding the COVID-19 pandemic, respondents reported the top issue resulting from the "fast-moving" nature of the business: high fluctuations in customer demand. On the other hand, the survey of top internal organizational challenges is keeping up with product innovation, as shown in Chart 6, which was chosen by 41% of those surveyed. A lack of end-to-end visibility, lack of collaboration between supply chain tiers and conflicting key performance indicators were equally viewed as key challenges by over one-third (37%) of respondents.

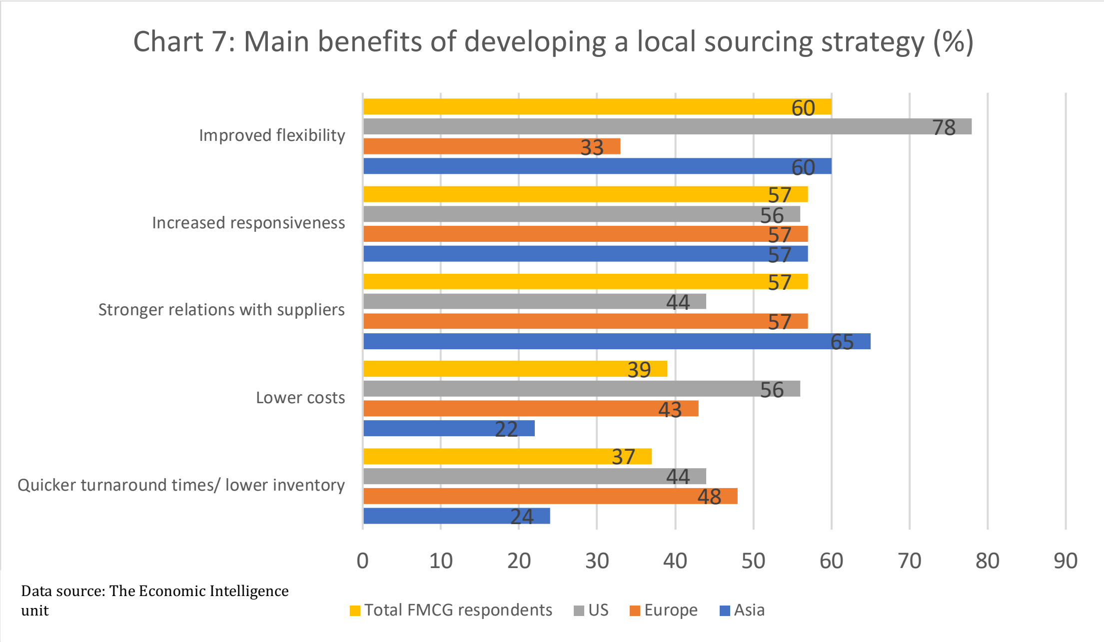




2.5.4 Local sourcing strategy of the FMCG industry

Making major changes to one's sourcing strategy in the form of local sourcing was cited by McKinsey as the second most important strategic objective, with 25% flagging it, following the improving traceability objective at 29%. At the regional level, local sourcing was the most important for both Asia-Pacific and Europe, at 30% and 29% respectively, the contrary to the US at 18%. The result of the US is quite surprising considering the risk and issues it encounters, such as the geopolitical instability in the South China Sea (Greg et al., 2018).

The survey led by The Economist shows that the main advantages of local sourcing are stronger relations with suppliers, improved flexibility, and increased responsiveness, and all of them reached above 50%. However, the summary figure conceals significant regional differences. Improved flexibility was very important for US (78%) and Asia (70%) respondents, but considerably less so for Europeans (33%), who prioritized increased responsiveness and stronger relations with suppliers instead (both 57%) as shown in Chart 7 (The Economist, 2020).



3 Methodology

3.1 Case Study Methodology

The goal of the paper is to understand business reality against the scientific literature of finding the balance point between global and local sourcing in the FMCG industry. Based on Yin (2014), a case study is an empirical analysis that "investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin Robert K., 2014, p 47). Yin (2014) suggests that the case study research method should be chosen if: (1) the research question has a "how" form; (2) the researcher does not have control over events, and (3) the research focuses on contemporary events. As this research meets all criteria, the case study method is implemented.

Nevertheless, the goal of this research is to improve the understanding of the mixed sourcing strategy developed by FMCG firms. Specific objectives are the following:

- What are the major global sourcing drivers?
- Whether the nature of goods affect the sourcing strategy?
- How to manage the cost and agility trade-off: does the company keep higher inventory in the pipeline?

As Yin (2014) advises, first, all cases should be analyzed as a whole and then findings should be compared and conflicted with the other cases. Therefore, a cross-case analysis is made to highlight the findings and show the contrasts and similarities in parallel to answer the stated research question. The interview questions design does not aim to give an exact answer to the main research question but tries to bring possible explanations and descriptions of the decision-making process.

3.2 Sample Selection

Due to the fact that MNEs have more resources and the ability to perform strategic purchasing by leveraging global and local sourcing, and stricter policy of sustainable sourcing (Handfield et al., 2002), the case study firms in this research are not a random sample but focus on large firms (min 10,000 employees) from the FMCG industry. This purposive sample was developed based on the author's knowledge and review of the literature. Out of the five chosen firms, AB InBev, Nestlé, and Pepsi are listed in the food and beverage category, and Procter & Gamble and L'Oréal are listed in the personal care category.

The interview guide used in the research was developed based on the research questions of interest and combined with a review of relevant literature. The performed interviews have lasted between 30 to 60 minutes and have been recorded in order to generate the exact transcription of the discussed information. The interviewees have been selected based on their competencies, responsibilities, and knowledge of the subject of matter. They are all located in Europe because the background research has highlighted the importance of the domestic market in the definitions of local and global sourcing. The interviewees of Pepsi and Procter & Gamble are both located in Belgium; however, the interviewee of L'Oréal is located in France, and the interviewees of AB InBev and Nestlé are in the Czech Republic. This is not considered a major issue given the countries' proximity to Belgium. Moreover, the responsibility of all interviewees is focused on the European zone. Table 6 lists more information about the five selected firms.

Table 6: Characteristics of firms selected for multiple case study

Company	**Headquarter**	**Revenue in 2021**	**Number of Employees**	**Purchasing office locations**	**Interviewee's position**
AB InBev	Belgium	$54.3 billion	170,000	Czech Republic	Sourcing Manager
Nestlé	Switzerland	CHF 87.088 billion	276,000	Czech Republic	Category Buyer
Pepsi	United States	$ 25.25 billion	309,000	Belgium	Procurement Manager

Procter & Gamble	United States	$ 76.12 billion	101,000	Belgium	Global Purchasing Manager
L'Oréal	France	EUR 32.28 billion	85,087	France	Secure Procurement Lead

Sources: AB InBEV (2021), Nestlé (2021), Pepsi (2021), Procter & Gamble (2021), L'Oréal (2021)

3.3 Research Limitation

The approach of this research is built to be as comprehensive as possible, however, the limited number of five interviews with major players in the FMCG industry is still not sufficient to represent the whole industry. Also, the interviewees work on different categories, ranging from raw materials, services, and CAPEX, and the buyers of these different categories could implement different sourcing strategies. A larger sample base is required if wish to perform a cross-category analysis. Nevertheless, it could be considered for future research.

4 Case Study

4.1 AB InBev

4.1.1 Company Overview

Anheuser-Busch InBev, commonly known as AB InBev, is a Belgian multinational drink and brewing company based in Leuven, Belgium. It has around 630 beer brands sold worldwide. AB InBev was formed through InBev acquiring Anheuser-Busch. In 2016, Anheuser-Busch InBev acquired South African multinational competitor SABMiller. AB InBev was the world's largest brewer even before the acquisition of SABMiller and is considered one of the largest FMCG companies in the world.

AB InBev launched innovative platforms such as the business-to-business "BEES platform", which is a direct-to-consumer e-commerce solution that integrates fintech services. In the emerging biotech innovation, AB InBev leverages its fundamental brewing and fermentation capabilities in creative ways (*AB InBEV 2021 Annual Report*, 2021).

AB InBev's Premium beer is growing almost twice as fast as premium spirits over the last few years, and beer is better positioned to further benefit from premiumization. Euromonitor projects that beer will grow and gain a share of value and volume over the next five years due to beer's runway to further premiumize as well as expected population and per-capita consumption growth in key beer markets (*AB InBEV 2021 Annual Report*, 2021).

AB InBev's 2025 Sustainability Goals aim to drive progress across the supply chain, and they are making progress locally in communities across different zones. From the brewing process to the packaging and more, AB InBev is innovating across the supply chain to make an impact. For example, it is announced in Brazil that its first large brewery, Ponta Grossa, and its first malting site, Passo Fundo, became carbon neutral. Located in the South region of Brazil, both the brewery and the malting site have reduced approximately 9,700 tons of carbon dioxide (CO2) annually since 2018 (*AB InBEV 2021 Annual Report*, 2021).

Since packaging makes up the largest part of AB InBev's carbon footprint, it is innovating across the packaging scope to reduce emissions. For instance, Budweiser Brewing Group in the UK piloted ultra-low-carbon Budweiser cans, which represent the lowest carbon footprint cans ever produced in Europe. AB InBev also developed a game-changing glass innovation by creating the world's lightest longneck glass beer bottle for commercial production. AB InBev is now exploring how to roll out the new bottle and further decrease the carbon footprint. It should be highlighted that lightweight glass bottles cut CO2 emissions by an estimated 17% per bottle. Additionally, Corona became the first global beverage brand with a net-zero plastic footprint globally in 2021 (*AB InBEV 2021 Annual Report*, 2021).

4.1.2 Case Study

The interviewee of AB InBev for this study is Mr. Batin, who locates in AB InBev European Procurement office in Prague, Czech Republic. He is the sourcing manager for RAU - Raw Materials, Auxiliaries which are chemicals, and Utilities which are electricity, gas, CO2, nitrogen, etc. Mr. Batin is responsible for the tender process and the sourcing strategies. He covers both European zone procurement and global procurement.

Mr. Batin confirms that AB InBev adapts a mix of global and local sourcing strategies. Concerning the global sourcing drivers, Mr. Batin states it's mostly due to the big scale that these global suppliers can cover and the efficiency level they can reach. Moreover, these global suppliers have a global supply chain and a presence in many zones. According to Mr. Batin, especially for products like malt, barley, and bottles, AB InBev mostly works with large global suppliers. There's no downside to working with global suppliers according to Mr. Batin as people are all professional and international, the only complexity could be that it's more difficult for AB InBev to leverage its size. When dealing with another huge supplier, it's more strategic partnership, long-term view discussion than leveraging size to get better condition.

As AB InBev executes a mix of strategies, Mr. Batin states that it always strategically allocates and keeps relationships with local suppliers, even though AB InBev is paying a premium for it. The local suppliers are not offering the best price; however, they often position themselves to offer something different. They provide flexibility, creativity, improve service level, decrease lead time. AB InBev adopts a mix strategy due to the following 2 reasons, firstly, it's interested in having exposure and having a relationship with these local suppliers. Secondly, keeping a competition with global suppliers, and retaining the flexibility to change suppliers if one fails. For example, AB InBev buys around 80% of stainless kegs from China and 20% from Europe. AB InBev decides to keep the flexibility, and it cannot go 100% to China because if something happens then it's not even a customer of any other suppliers in Europe.

The demand pattern in the beer industry is cyclical - summers are the high season and winter is the low season. In terms of the number of SKUs, it's much less than the Maintenance, Repair and Operations Category (MRO). For Raw Materials, there are different types of malts, barley, hops, flavors, sugars, and one SKU has a huge volume. According to Mr. Batin, it's also important to look at the total cost of ownership (TCO) instead of only the unit price. For instance, he states that it's not cost-efficient to import sugar from Brazil or trade from other zones, simply because it's going to overpay on the transport. In this case, sugar is more traded locally. As the result, the nature of the goods also makes a difference when adopting sourcing strategies. AB InBev keeps the inventory level as low as possible.

Regarding the supplier performance evaluation, Mr. Batin confirms that it's not executed well in AB InBev. It's being worked on as the Supplier Relationship Management agenda, which AB InBev is trying to put into a framework, how to measure the performance, and put in place an unbiased KPI, which could include lead time adherence, supply on-time in-full, and quality.

As for the important factors for determining sourcing strategy in the future, Mr. Batin states that, firstly, it's supply security. Secondly, the prices are very volatile at the moment due to various reasons, especially commodity prices. As part of the sourcing strategy, procurement needs to understand the category as much as possible, and one can better be on top of the market or fast-changing environment.

4.2 Nestlé

4.2.1 Company Overview

Nestlé is a Swiss multinational food and drink corporation. Nestlé's products include baby food, medical food, bottled water, breakfast cereals, coffee and tea, confectionery, dairy products, ice cream, frozen food, pet foods, and snacks. The company has made several corporate acquisitions, including Rowntree Mackintosh in 1988, Klim in 1998, and Gerber in 2007.

Nestlé ‘s long-term value creation model is based on balancing top- and bottom-line growth and improved capital efficiency. There are three strategic pillars: growth through continuous innovation, operational efficiency, and resource and capital allocation, including acquisitions and divestitures. Nestlé reaches success by building and maintaining a diversified portfolio, both in geography and category. Its strong agility in changing environments also contributes to long-term financial performance (*Nestle Annual Report 2021*, 2021).

In terms of sustainability, science and technology play a major role in making a difference in food production. Nestlé assesses solutions to reduce emissions in dairy farming to develop climate-friendly milk. Partnering with ETH Zurich, Nestlé is focused on reducing the carbon footprint of agricultural raw materials, and nutritious crops for plant-based meat, dairy, and seafood alternatives. By upcycling agricultural side streams, Nestlé avoids food waste and nutrient loss, and it also opens new revenues stream for farmers. Nestlé works on packaging innovation to improve sustainability. In 2021, Nestlé introduced paper-based packaging for several brands, paper cups and straws, and bio-based lids and scoops. It also reduced the use of virgin plastics, which are newly created without any recycled materials. Moreover, it revealed prototype 100% rPET Perrier bottles, which is an innovative recycling technology (*Nestle Annual Report 2021*, 2021).

4.2.2 Case Study

The interviewee of Nestlé for this study is Ms. Koutnakova, who locates in Nestlé European Procurement office in Prague, Czech Republic. She was the Category Buyer - Raw Materials. Ms. Koutnakova was responsible for the Czech Republic and Slovakia region, creating the local category strategy. One of the main categories that Ms. Koutnakova was working on was flavors. The Nestlé procurement organization structure is first the global category management for global scope, then it’s spread between categories and the application to local buyers.

According to Ms. Koutnakova, Nestlé has five major global suppliers to work with when it comes to flavors, they cover the whole Nestlé scope globally. The first driver to select these five major suppliers is the global capacity as Nestlé needs global coverage. The supplier must meet Nestlé's global demand. The second driver is the supplier's financial stability. Thirdly, Nestlé looks at the portfolio of the supplier, checks the connection with its factories, and how the supplier can support the coverage of Nestlé production sites. It is also important to Nestlé that the supplier's production sites are in proximity to its own production sites. Lastly, it is also depending on how long the company is on the market, and if there's historical cooperation with Nestlé. The biggest challenge for Ms. Koutnakova to work with these global suppliers is the complexity of the company and its structure. Sometimes the global suppliers have different entities for different functions or countries, and there will be a different contact window for each entity. Ms. Koutnakova shared an example that she would have to communicate to every scope separately, to just get the feedback, prices, and the Service Level Agreements (SLAs), and it's extremely time-consuming.

Regarding the demand pattern of raw materials in Nestlé, Ms. Koutnakova states it's relatively stable. As the raw materials are used globally, it's usually the global buyers who would negotiate with suppliers with a global scope, and it includes a lot of SKUs - thousands of them just for flavors. But to look more in detail, there are hundreds of strawberry flavors among all flavors. Ms. Koutnakova states that it's definitely no need for hundreds of strawberry flavors, so harmonization is one of the biggest focuses that Nestlé does regionally. As strawberry flavor is not real strawberries exactly, so it could be that people have different palettes of the taste in different countries. Then it's not realistic to harmonize the whole globe.

Regarding working with local suppliers, Ms. Koutnakova states that it only happens to Nestlé's special products that are only sold locally. She gives an example, there's a specific type of the candy of Nestlé that's sold only in the Czech Republic and Slovakia. It's a specific mint candy that has a historical background, and Nestlé is buying this type of flavor from a local supplier. There are some challenges to working with local suppliers, the first is they don't speak English. Then the local supplier doesn't want to cooperate in other aspects such as global contracts or documentation. Nestlé only keeps this supplier because it cannot match the flavor with any other suppliers, or even if the flavor gets close, the price would be much higher. This is also part of the strategy to change them or at least to have an alternative solution, as mono-sourcing is very risky, especially within the direct raw materials procurement scope.

Regarding the supplier performance management of Nestlé, they are mainly looking at the on-time in-full delivery and quality. There are different ratios assigned to each criteria.

As for the important factors for determining sourcing strategy in the future, Ms. Koutnakova states that sustainability would be one of the main topics, in hand with the prices and the savings. Sustainability is influencing the strategy when we look at logistics. Based on the proximity, if the supply is this closer, it could reduce the CO2 emission. Moreover, sustainability is more than just transportation, it could be concerning renewable energy. Nestlé is looking at the suppliers that are working toward this direction. The second factor would be digitization, putting in place automation or new systems, and implementing a more automatic approach. Lastly, it's the secure the supply, it could be using a mixed approach of sourcing from different regions or developing the possibility to replace materials.

4.3 Pepsi

4.3.1 Company Overview

Pepsi is an American multinational food, snack, and beverage corporation. Pepsi was formed in 1965 with the merger of the Pepsi-Cola Company and Frito-Lay, Inc. There have been several mergers and acquisitions, the largest and most recent acquisition was Pioneer Foods in 2020 for $1.7bn and before that, it was the Quaker Oats Company in 2001, which added the Gatorade brand to the Pepsi portfolio and Tropicana Products in 1998. In 2021, the company possesses 23 brands that have over $1 billion in sales. Pepsi has operations all around the world and its products were distributed to more than 200 countries.

Pepsi is inspired to create positive change for the planet and people. In the Positive Agriculture pillar, Pepsi is working to source crops and ingredients in ways that restore the earth and strengthen farming communities by spreading regenerative practices across 7 million acres by 2030. It is estimated the effort will eliminate at least 3 million tons of greenhouse gas emissions by the end of the decade. In the Positive Value Chain pillar, Pepsi is working to build a circular and inclusive value chain by continuing to transition to 100% renewable electricity in direct operations, and approximately 70% of the global electricity needs were met by renewable sources. In 2021, Pepsi partnered with N-Drip to help farmers worldwide to adopt water efficiency technology across 10,000 hectares by 2025. Pepsi is also working on introducing more sustainable packaging into the value chain, it launched all Pepsi-branded products in 100% recycled PET bottles in Spain in 2021, with plans to expand to 11 additional European markets in 2022 (*PepsiCo Annual Report 2021*, 2021).

4.3.2 Case Study

The interviewee of Pepsi for this study is Ms. Barros, who locates in Brussels, Belgium. She is the Procurement Manager for Northwest Europe Procurement Indirect, which is focused on IT and purchase services. Pepsi Procurement Organization is a combination of both centralized and decentralized structures because it is present in many countries, and there's a local structure so it requires people locally, and then there's another team working at a sector level, which covers more regions.

Ms. Barros confirms that she implements a mix of sourcing strategies in Pepsi. Generally, it sources globally, there are some advantages because of the volume, consolidating the volume for all the countries, or the standardization of the process. But sometimes it needs to adjust to local requirements based on each country's requirement. For example, merchandising in one country could require only merchandisers; however, in other countries, it's different people who will take responsibility for selling and checking the stock level. When it's the case, it's difficult to find a single supplier that can have people provide all services in all the countries, so it's beneficial to go local, due to the specific service required to customize locally.

The portfolio of the Indirect Category is very broad, it can be any service coming from HR, fleet, legal, or merchandising services, and not the same strategies or patterns for all the sectors of the Indirect Category. It could depend on the current market or political situation nowadays, for instance, there's a shortage of fleet due to COVID-19 and a shortage of commodities due to the war between Russia and Ukraine.

When running a tender, normally Ms. Barros tries to use the global volume to gain more leverage in negotiation, but she also includes local players. Usually, it is down to the savings to assess if implementing a simple tender or a global tender. But then of course there are other things to evaluate, such as services or tools for reporting, or local companies don't have the capacity to provide the required service. There's an internal policy of Pepsi to regulate the duration of the service one supplier can cover, and after the indicated time, the project needs to be tender again. For instance, it could be every two years, the service needs to be tender. It is also possible to tender the project at another time if the business is requiring a new service or the business is not satisfied with the service level of the supplier, but the situation needs to be proved or justified by valid reasons.

According to Ms. Barros, the current challenge to her sourcing strategy is the increased changing price. In general, the market in all the categories is changing every day, and the prices are increasing, as a result, it's difficult to fix the price or to have a certain agreement that lasts for a period. The cost and agility trade-off is not a major concern for Ms. Barros, it’s usually based on the urgency of the item.

Sustainability is important to Pepsi, and there’s a strong target for it. It is part of the procurement’s responsibility to implement or add sustainability in the sourcing. Pepsi not only looks at the distance with suppliers but also assesses other measures regarding sustainability. Pepsi is questioning information about the supplier’s strategy, and supplier’s contribution to the sustainability pillars.

4.4 Procter & Gamble

4.4.1 Company Overview

The Procter & Gamble Company (P&G) is an American multinational consumer goods corporation. It specializes in a wide range of personal health/consumer health, and personal care and hygiene products, and the products are categorized into several segments including beauty, grooming, health care, fabric, and home care serving customers ranging from baby to family care.

The ability to optimize technologies had played an important role in bringing the strategy to market. It has been a great challenge to P&G due to its increasingly complex global business, with more than 300 brands, nearly 110,000 employees, tens of thousands of suppliers, and 140 countries in worldwide distribution (Sandholm et al., 2006).

In the traditional practice, companies made sourcing decisions through in-person negotiations with suppliers. The advantage is that the supplier and the buyer can use expressive language for finding win-win deals, and the deals will be implemented because both parties can express operational constraints and take them into account for each deal. On the other hand, the disadvantage of this process is that it’s slow, lacks structure and transparency, introduces low levels of competition among suppliers, and in the end, difficult for buyers to make decisions.

These problems and the overall complexity have been intensified even more by a shift of sourcing strategy in the 1990s, P&G changed from a plant-based sourcing strategy to a global corporate-wide sourcing strategy. The goal was to better leverage the joint buying power of its plants through global sourcing events (Sandholm et al., 2006). At the same time, P&G also realized that it needed a tool that would allow it to embrace complexity rather than simplify it. P&G wanted to leverage the scale of its sourcing volume while maintaining its relationships with suppliers (Smock 2004). Moreover, in 2014, P&G announced that it was streamlining the company, dropping and selling around 100 brands from its product portfolio in order to focus on the 65 brands, which generated 95% of the company's profits.

P&G is committed to positively impacting homes, communities, and the planet — especially focusing on the areas of Climate, Forestry, Water, and Packaging. P&G is invested in developing products that are superior in a sustainable way. It works on continuing to reduce carbon footprint and look for more circular approaches in the supply chain (*P&G Annual Report 2021*, 2021).

Plastic waste is a serious problem for the environment, especially when it's not only land waste, but also ends up in rivers and oceans. It's a complex global challenge that requires a more comprehensive, collaborative, and long-term approach across the entire plastics lifecycle and different segments of the supply chain. P&G has doubled the use of recycled resin over the past five years, redesigned the packaging to avoid more than 200,000 tons of plastic over the past decade, and is working toward the goal of 100% recyclable or reusable packaging by 2030 (*P&G Annual Report 2021*, 2021).

4.4.2 Case Study

The interviewee of Procter & Gamble for this study is Ms. Morega, who locates in P&G Procurement office in Brussels, Belgium. She is the Global Purchasing Manager of the Capital Equipment/ Automation & Robotics category. Ms. Morega is responsible for mainly the equipment at End of Line (EOL), and driving automation and robotics in some lines. She covers the global procurement scope.

Ms. Morega implements a mix of global and local sourcing strategies, and it's chosen differently based on the budget, market conditions, or language requirements. For capital equipment, it's often more difficult to buy it from a vendor that one has never worked with in the past since the equipment has to meet certain standards, and it takes a long time to qualify a vendor.

According to Ms. Morega, in general, the demand pattern of capital equipment is not focused due to the nature of the goods. For instance, the buyer buys a palletizer, and it should work for the next 20 years, and it only needs maintenance service. But then because of COVID, the demand for automation and robotics have increased a lot, because people couldn't or were not allowed to go to work.

As it comes to the cost and agility trade-off, Ms. Morega states that when purchasing a piece of equipment, it's more than just cost and flexibility. She also looks at the relationship with vendors, the performance of the equipment, and sustainability becomes an important criterion for the procurement population. She looks at other factors which sometimes overweight the cost.

Regarding the supplier performance evaluation, Ms. Morega states that normally, she makes a five-year strategy and evaluates it after certain periods of time. She examines what's changed and if the approach is still relevant for the current strategy. Especially for the equipment category, she would look at if the active current vendors are still meeting the requirements of the business, as the business is evolving through time. She gives an example, in EOL there are different types of palletizers - traditional palletizers, robotic palletizers, and hybrid palletizers. The traditional one is bulky but at very high speeds. The robotic one can be very compact, but it doesn't have the same speed and payload as a traditional palletizer. A hybrid palletizer would have the capacity to handle multiple SKUs, so it provides speed and flexibility. Then she would look at what is the business moving toward, in terms of capacity, speed or payload, or more flexibility that can be upgraded or downgraded. Other than the business condition, Ms. Morega also analyzes how does cost evolves over the years, and she examines the relationship with the vendor and the KPIs.

As for the important factors for determining sourcing strategy in the future, Ms. Morega says the first factor is sustainability. The procurement process and responsibility are moving away from a transactional approach to a more strategic one. Secondly, it would be information security. Cyber security is becoming crucial as it has opportunities to harm the companies, so the procurement team could pick up more IT technology purchases. Or even look at the QR code on products, that's creating new opportunities. Thirdly, it would be data analysis. The way the historical data is visualized or stored is important for making future strategic decisions. Fourthly, it would be the relationship with the vendors, as in supplier relationship management. It would be part of a well-established strategy for procurement, and one needs to invest in long-term strong relationships with vendors and keep a diversified vendor pool. Moreover, one should evaluate if the vendors are meeting fair sourcing. There are companies having lawsuits or issues with child labor and unfair conditions in their factories, so fair sourcing should also be part of the strategy.

4.5 L'Oréal

4.5.1 Company Overview

L'Oréal is a French personal care company, it is the world's largest cosmetics company and has developed activities in the field concentrating on hair color, skincare, sun protection, make-up, perfume, and hair care. The Group continues to expand this portfolio through targeted acquisitions, some major acquisitions included L'Oréal acquiring YSL Beauté in 2008, Shiseido selling its Carita and Decléor brands to L'Oréal for €227.5 million in 2014, and L'Oréal acquiring NYX Cosmetics for an undisclosed price also in 2014.

L’Oréal adopts a Glocalization strategy, which means the globalization of its brands with a detailed understanding and respect for local differences. The goal of the Glocalization strategy is to offer custom-made and inclusive beauty by recognizing the specific traits and aspirations of consumers in different regions of the world. Contrary to standardization, it is rooted in the careful attention to consumers and respect for the differences in one’s needs, lifestyles, desires, and traditions (L’Oréal, 2021).

L’Oréal developed a labeling system for the social and environmental impact of its products, and it grades from A to E. There are 14 planetary impacts measured at every stage in the product lifecycle. Launched for rinse-out products in France by Garnier in 2020, the labeling system was later rolled out in several European countries in 2021, including Germany, the United Kingdom, Spain, Italy, and Scandinavia. The L’Oréal Group plans to continue expanding the system to other brands, markets, and product categories. Moreover, L’Oréal, Henkel, LVMH, Natura & Co, and Unilever announced to collectively develop a shared assessment and rating system open to all beauty industry companies, focusing on the environmental impact of beauty products. The goal is to provide consumers with clear, transparent, and easily comparable information to encourage sustainable consumption choices (L’Oréal, 2021).

4.5.2 Case Study

The interviewee of L’Oréal for this study is Ms. Calpes, who locates in the L’Oréal European Procurement office in Paris, France. She is the Raw Materials Secure Procurement Leader. Ms. Calpes is responsible for securing raw materials and avoiding shortages of raw materials to disrupt business continuity. She works in partnership with top risky suppliers to try to find solutions to avoid price fluctuations and shortages all along the supply chain. Moreover, she works with the researchers at labs, where people try to find new raw materials that could be more secure, and she also works with buyers to look for new suppliers to diversify the supplier pool.

Ms. Calpes implemented a mix of sourcing strategies at L’Oréal. The top factor that she considers when selecting a supplier is the know-how due to the progressing innovation of L’Oréal products. It involves new technology or biotechnology, and these innovations create more complications for raw materials, packaging, and finished goods. Ms. Calpes actively screens and searches for the capability and capacity of worldwide suppliers, from whom then L’Oréal distributes the among them. The suppliers need to be able to reach a minimum required capacity for L’Oréal to be interested in working with them, as a result, the capacity is also an important factor when selecting suppliers. In some cases, the location of suppliers is crucial as well. It’s a new factor that L’Oréal is taking into account now, especially the transportation complication after Covid-19 and the huge price fluctuation due to Russia and Ukraine wars.

Ms. Calpes finds culture to be a challenge when working with global suppliers. we try to let every zone manage the supplier, but it's complicated because in the majority of the cases the raw materials are common in a lot of finished goods that are going to a lot of countries. There are also occasionally some quality issues. Ms. Calpes mentions another challenge is the lead time, especially when transportation is tense worldwide after Covid-19. There’s a challenge internally within L’Oréal is forecast accuracy. It’s even more crucial because the market is changing rapidly every day. Without a reliable forecast, it’s complicated to align and communicate demand with suppliers. Ms. Calpes is not certain if the higher price is a challenge when working with local suppliers. From her impression, there’s a bit different due to the cost of labor per hour. However, she stresses that L’Oréal is strongly involved in the solidarity sourcing project, meaning that L’Oréal tries to source more locally and commit to sustainability. L’Oréal tries to source locally whenever possible, nevertheless, it would never be 100% sourced locally due to the constant new product innovations. Another reason to source locally is the shorter lead time compared to global sourcing. Ms. Calpes sees more social and environmental disruption in the world now, for instance, there are a lot of climate problems in the US, the flooding in Germany in 2021, the ongoing war between Russia and Ukraine, and Covid in 2019. Sourcing locally could bring the benefit of shorter lead time. She also sees that’s the case how some startups are entering the cosmetics field, and they are winning market shares because it's easier for them to source locally.

The raw materials of L’Oréal are mainly separated into two parts: The formula and the packaging, and there are several thousand SKUs. Then there are different categories depending on the origin, for example, natural raw materials, chemicals, actives, etc. The demand pattern varies depending on every single raw material and every single supplier, but in general, the demand is quite unstable. The sales of most of the brands that are growing now in L'Oréal depends on social media marketing result. It's extremely complicated to forecast the demand in this case.

Regarding the supplier performance evaluation, Ms. Calpes does business reviews with suppliers once a year. The KPI includes sustainability, price, lead time, on-time in-full, etc. Out of all criteria, the lead time is especially important, there are people dedicated to measuring the lead time by the suppliers and raising an alert when the lead time is too long. Then quality also comes on top of the list. Quality is important to L'Oréal due to the impact it has a great impact on people's health.

As for the important factors for determining sourcing strategy in the future, firstly, it's to be able to give demand visibility to the suppliers. L'Oréal needs to better understand its consumers and the volumes to be reliable for its suppliers. Secondly, it needs to be more reactive and more agile. Procurement must work more towards finding new suppliers and new raw materials to anticipate the risk and disruption in business.

5 Discussion

This chapter compares the five case studies with theoretical concepts, and the goal of this section is to generalize the contrasts and similarities highlighted in the cross-case analysis, and the summary is shown in Table 7. The discussion is not aimed to give an exact answer but provide an explanation and description of the business reality of the research questions.

Table 7: Intra-case Analysis Summary

Company	Sourcing strategy	Global sourcing drivers	Local sourcing drivers	Whether sourcing strategies differ by the nature of goods	Whether identify cost and agility trade-off
AB InBev	Mixed strategies	✓ Capacity & efficiency level ✓ Global present to supply worldwide plants	✓ Flexibility ✓ Creativity ✓ Improve service levels ✓ Decrease lead time	No, but look at cost-weight ratio	No, implement other strategies to secure supply
Nestlé	Mixed strategies	✓ Capacity & coverage ✓ Financial stability ✓ Connection to plants	✓ Local specialty that cannot be replaced by global player	No, capacity still the major factor	No, capacity still the major factor
Pepsi	Mixed strategies	✓ Global volume to have better leverage	✓ Better meet local regulations	No, irrelevant to services	No, only based on urgency
P&G	Mixed strategies	✓ Better technology ✓ Historical relationship	✓ Local machine implementation ✓ Language requirement	No, irrelevant to CAPEX	No, irrelevant to CAPEX
L'Oréal	Mixed strategies	✓ Know-how ✓ Capacity ✓ Present in varies location to reduce risk	✓ Sustainability ✓ Shorter lead time	No, improving forecast	No, improving forecast

- What are the major global sourcing drivers?

All five interviewees execute a mixed sourcing strategy, to start with AB InBev, its global sourcing drivers are the big scale and capacity that global suppliers can cover and the efficiency level they can reach. Moreover, the global suppliers have a global supply chain and a presence in many zones, and they can supply to AB InBev worldwide plants. Nestlé's global sourcing driver is first the global supplier capacity and coverage, then it is the supplier's financial stability. Lastly, Nestlé examines the portfolio of suppliers, checking the connection with its factories. The global sourcing driver for Pepsi is the advantage of consolidating the global volume for all the countries. P&G also implements a mix of global and local sourcing strategies, and it's chosen differently based on the budget, market conditions, or language requirements. For capital equipment, it's important to have a historical relationship with suppliers as equipment needs to meet certain standards, and it takes a long time to qualify a new supplier. The top factor for L'Oréal to consider when selecting a supplier is the know-how of suppliers due to the progressing innovation of its products. Then the suppliers need to be able to reach a minimum required capacity. The location of suppliers is a new factor that L'Oréal is taking into account now, especially the transportation complication after Covid-19 and the huge price fluctuation due to Russia and Ukraine wars.

As all interviewees also implemented local sourcing in one's strategy, the drivers for local sourcing are as follows. The local suppliers provide flexibility, creativity, improve service levels, and decrease the lead time for AB InBev. AB InBev uses a mixed sourcing strategy to ensure its supply is uninterrupted and reduce risks. Nestlé only source from local suppliers when the unit is not available from the global suppliers, and the raw material is to make special Nestlé product that only sells in a certain market and not globally. Pepsi sources locally when there are specific local requirements, and it's difficult to find a single supplier that can have people provide services for different requirements in all the countries. L'Oréal is strongly involved in the solidarity sourcing project, meaning that L'Oréal tries to source more locally and commit to sustainability. L'Oréal tries to source locally whenever possible, nevertheless. Another reason to source locally is the shorter lead time compared to global sourcing.

When it comes to the challenges of working with global suppliers, AB InBev states that it doesn't find many challenges to work with global suppliers, the only complexity could be that it's more difficult for AB InBev to leverage its size to get better condition. Nestlé finds the challenge to working with global suppliers is the complicated organizational structure, it could make communication and cooperation very time-consuming. L’Oréal finds culture to be a challenge when working with global suppliers. There are also occasionally quality issues, and problems of long lead time, especially when transportation is tense worldwide after Covid-19. However, there’s also a challenge internally within L’Oréal which is forecast accuracy.

- Whether the nature of goods affect the sourcing strategy?

As the interviewees are responsible for different categories, so the “goods” here could be drastically different from company to company. The demand pattern of raw materials for AB InBev is cyclical – summer is the high season and winter is the low season. There are several raw materials for making beers, such as different types of malts, barley, hops, flavors, sugars, and each SKU has a huge volume. The nature of the goods does make a difference when adopting sourcing strategies as AB InBev look at TCO instead of only the unit price, so it evaluates the cost-weight ratio to decide on sourcing location.

The demand pattern of raw materials for Nestlé is relatively stable. As most of the raw materials are used globally, it’s the global buyers who negotiate with suppliers with a global scope, and it includes a lot of SKUs - thousands of them just for flavors. The demand pattern doesn’t affect the sourcing strategy of Nestlé due to the large global volume and there are only particular suppliers that can support it.

The portfolio of the Indirect Category of Pepsi is very broad, it can be any service coming from HR, fleet, legal, or merchandising services, and not the same strategies or patterns for all the sectors of the Indirect Category. It could depend on the current market or political situation nowadays. As this category involves services, the nature of goods is not relevant in this case.

For P&G, the demand pattern of capital equipment is not focused due to the nature of the goods, as the machine usually functions for a few decades, and it only needs maintenance service. There is still exception such as the demand could change based on market conditions, for instance, the demand for automation and robotics has increased a lot during Covid-19. Overall, the nature of capital equipment does not affect the sourcing strategy.

The raw materials of L’Oréal are mainly separated into two parts: The formula and the packaging, and there are several thousand SKUs. In general, the demand is quite unstable. The sales of most of the brands that are growing in L’Oréal depends on social media marketing result. It's extremely complicated to forecast the demand in this case. L'Oréal is not changing its strategy to use more local suppliers because of the unstable demand.

In conclusion, the business reality is not aligned with Fisher's proposition of sourcing strategies differ depending on the characteristics of a product's demand. Most of the interviewees confirmed that even though their categories' demand is unstable, they still implemented mostly a global sourcing strategy due to the large volume that only large global players can satisfy. Nevertheless, for the category such as capital equipment, the demand pattern is irrelevant due to the long lifetime of machines.

- How to manage the cost and agility trade-off: does the company keep higher inventory in the pipeline?

AB InBev doesn't find there's a major problem as cost and agility trade-off, they have other strategies to secure the supply chain, and they keep the inventory level low at the same time. The cost and agility trade-off is not a concern to Nestlé as it needs global suppliers to cover its large demand. The cost and agility trade-off is also not a major issue for Pepsi, it's usually based on the urgency of the item. For P&G, when purchasing a piece of equipment, it's more than just cost and flexibility. The relationship with suppliers, the performance of the equipment, and sustainability become more important criteria, and these factors could overweight the cost. L'Oréal focuses on its forecasting to reduce the supply risk, and it's cooperation with upstream suppliers to secure its supply.

In conclusion, the business reality does not find Jin's proposition of the cost and agility trade-off to be a major problem. Companies have other programs to secure their supply chain, such as keeping several different sources, and again for a certain category like capital equipment, other factors are more important than cost and agility for determining sourcing strategy.

There are other business practices can be concluded from the interview, for supplier assessment, AB InBev states that it's not well implemented, but to be further developed in the future, it will look at lead time adherence, supply on-time in-full, and quality. For Nestlé, it assesses suppliers of on-time in-full delivery, and quality. There are different ratios assigned to each criterion. For P&G, regarding the supplier performance evaluation, there's a five-year strategy and one evaluates it after certain periods of time. It's examined if the approach is still relevant to the current strategy. Other than the business condition, the cost evolution over the years is analyzed, and the relationship with the suppliers and the KPIs are also investigated. For L’Oréal, there are business reviews with suppliers once a year. The KPI includes sustainability, price, lead time, on-time in-full, quality, etc. Out of all criteria, the lead time is especially important.

As for the important factors for determining sourcing strategy in the future, for AB InBev, it’s the supply security and understanding more of the category to tackle the volatile prices and fast-changing environment. For Nestlé, the important factors are sustainability, in hand with the prices, and the savings. Then it would be digitization and supply security. For P&G, the important factors for determining sourcing strategy in the future are sustainability, information security, and data analysis. Lastly, it would be the relationship with the vendors, as in supplier relationship management. For L’Oréal, the important factors are demand visibility, and procurement needs to be more reactive and more agile to anticipate the risk and disruption in business.

From the above discussion, I can conclude and give the following proposition to MNEs of the FMCG industry:

<u>Proposition 1:</u> The MNEs should improve their forecast accuracy.

As all interviewees confirmed that due to the large volume that MNEs need, it’s not feasible to work with local suppliers to keep their supply chain agile. However, having an accurate forecast could make their demand pattern more stable despite the nature of products, as a result, it could better secure the supply chain. The company can improve its forecasting by digitalizing and analyzing data, understanding past patterns, improving demand visibility, etc.

<u>Proposition 2:</u> The buyer should have the expertise of the responsible category.

As the environment nowadays is fast-changing and the prices are volatile, the buyer should have all the information regarding market conditions, market trends, cost structure, and risk anticipation to develop its sourcing strategy. Moreover, with regular evaluation of how the business reality is still aligned with its strategy.

6 Conclusion

This thesis focuses on the question of how to find the balance between global and local sourcing in the FMCG industry, and it's studied further by three main research questions: What are the major global sourcing drivers? Whether the nature of goods affect the sourcing strategy? How to manage the cost and agility trade-off: does the company keep higher inventory in the pipeline? Through the five case studies with major FMCG firms, intra- and cross-case analyses were conducted, which allow generating propositions that summarize findings.

Even though all five FMCG companies from the case studies implement a mixed sourcing strategy, they still tend to use more global sourcing due to the large demand these large MNEs require. Local sourcing is kept as a second source to ensure supply is uninterrupted, sustainability concern, or meets unique local requirements.

To discuss whether the nature of goods affects the sourcing strategy, the answer, in short, would be no, it does not affect the sourcing strategy of most FMCG companies, mostly due to the same reason that the large volumes that MNEs demand. However, it can still be further investigated as the categories of interviewees in this case study are different and the data sample is too small to reach a general conclusion. It's advised to be looked into medium size companies for future research. Then for the cost and agility trade-off, it is not a major concern for the FMCG industry nowadays, as there are more factors to take into consideration for one's strategy.

Concerning supplier assessment, in most cases, there's a standard KPIs to evaluate suppliers' performance. The top criteria considered are whether the supply is on-time in-full, and quality, then lead time. Lastly, regarding important factors in deciding future strategies, supply security, and sustainability.

This research undeniably presents some limits. The choice of companies for the case study was made on the size and internalization factors of the FMCG industry. However, companies are working in different sectors between food/ beverage and personal care. Moreover, the interviewees are responsible for different categories also presents difficulties to generalize a conclusion as the sourcing strategy may differ from category. Therefore, it could be interesting to select companies from the same sector and interviewees working in the same category to have better comparisons and provide more solid results.

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Appendix 1 Interview Guide

1. Could you give me a brief overview of the company?
2. What is your role in this company? What are your key responsibilities?
3. What is the category's demand pattern and portfolio?
4. Regarding your sourcing strategy, do you use local, global or mixed (glocal) sourcing? Why?
5. How do you develop your glocal sourcing strategy?
6. What are the factors or parameters that influence your glocal sourcing strategy? 7. How do you assess the effectiveness of your glocal sourcing strategy?
8. What are the biggest challenges to your glocal sourcing strategy? How do you deal with them?
9. According to you, what factors will become more important in determining your glocal sourcing strategy in the future (5 years)?

Appendix 2 Transcript

- **Interview AB InBev**

The interview was conducted on April 13th, 2022 with Mr. Artyom Batin, who is the Sourcing Manager - Raw Materials, Auxiliaries, Utilities in AB InBev.

(Y) Jui-Ting Yen – interviewer

(B) Artyom Batin - interviewee

(Y): What is your role in ABI and what are your key responsibilities?

(B): OK, I am the sourcing manager for RAU, so that's Raw Materials, Auxiliaries which are chemicals, Utilities which is electricity, gas, CO2, nitrogen that kind of stuff and also core products which is what we sell. I'm responsible for the tender process and the sourcing strategies, I'm responsible for only RPO categories, those are the European and GPO global procurement, they are responsible for the global categories. We do cooperate on the GPO-led categories. With GPO it's mostly responsible for the general strategy, but the zones are still responsible for sourcing and execution.

(Y): What are your category's demand pattern and portfolio?

(B): The demand pattern portfolio, if I understand you correctly, the demand pattern in the beer industry is cyclical - summers are the high season and winter is a lower season, so what we do is basically between February and March is you know as preparation for the high season where we are increasing our stocks, monitoring the suppliers have enough capacity. If they don't reproduce, to do all those things during the high season we survive as much as possible, and during the low season that's the time where we actually do our tenders, do our maintenance in breweries, and prepare for the next high season.

(Y): For the portfolio, do you have a lot of SKUs or it's more like focusing on maybe little specific items?

(B): We focus on everything, everything that goes as an ingredient for beer production, or electricity and gas.

(Y): Can I know for raw materials, how many ingredients? Because I know for MRO there are like thousands of parts.

(B): I have less. Water is counted as one but it's huge. We have different types of malts, different types of barley, different types of hops, different types of flavors, and different types of sugars. In terms of the number of SKUs, it's definitely much less than MRO. I used to work in MRO, it's different, so what we mostly have is certain SKUs, for example, the malt for Budweiser or for Stella, one SKU is really huge. And then you have smaller SKUs that are more used on specialties, for example, mojito flavor, that's a small one.

(Y): I see. Regarding your sourcing strategy, do you mostly go for a local supplier, global supplier, or a mix of strategies?

(B): It's a mix definitely. So in global categories, if you're looking at malt, barley, bottles- in packaging sizes bottles or cans, what you have there is you're only working with huge global suppliers. The suppliers have global supply chains, and they have a presence in many zones. They produce bottles in Europe and North America and in Asia, so you're mostly working with them, and you can only work with global suppliers just because of the scale that is needed to produce bottles and cans efficiently. You need a certain size for you to be competitive. It's not like tomorrow someone can start a bottle or can factory. So for those categories, you're really going to work with global suppliers, global strategy, and global sourcing. Then you have categories, for example, sugar is in a farm, locally it's traded, it's traded between different zones. But it's not cost-efficient to import sugar from Brazil, just because you're going to overpay on the transport. So the commodity part of the price of sugar is very high, so you are working with local European producers for those. And then you also have categories, for example, if you think of boxes, it’s just paper and when you're transporting paper, there's not much value added onto the carton itself, so the suppliers themselves, what they do with their footprint. Even though there can be let's say European or global companies, they have factories that are very localized and very near our production sites, so that you limit the distance and also the production of papers, the shorter there is the distance to our breweries, the more cost-efficient it is. So it really depends on the type of material it is, how much is the commodity part, and the scale.

(Y): Right. Do you find like if you are at a global scale, maybe because of their capacity, or because of their price, do you find like the risk come along with it? Do you also evaluate the risk? Or actually because of inventories so that actually doesn't matter?

(B): We try to keep our inventory as low as possible.

(Y):OK. Let’s say during COVID, and some hops are coming from maybe Asia, and they cannot come. There's a time gap, and then if you also keep your inventory very low. Does that affect you or would you want to change your strategy?

(B): So you mean if there's a supply disruption?

(Y): Yes yes.

(B): That's a very valid question now because we're seeing disruptions coming out of China due to COVID, increasing times on freight and so on. This does impact our strategy because let's say we import from China because of the price. It's much cheaper to import on a big scale than using local European suppliers. That's very evident, for example, for stainless kegs, the kegs that we buy around 80% of them come from China, and 20% come from Europe. In our sourcing strategy that we make a decision on is that we cannot go 100% to China because if something happens we're completely screwed, and we're not even a customer of anyone else in Europe. So we strategically always allocate and keep relationships with local suppliers, even though we pay a premium for it. We are interested in number one having exposure and having a relationship with these local suppliers, second, having a competition, and then I also have the flexibility to change suppliers if one fails.
(Y): I see. So for the more critical item, you will always keep a few suppliers, so if something happens.
(B): As well as with global suppliers, you're leveraging your size and volume to get the best conditions. If you're working with smaller local suppliers, you're not going to get the best price because they don't have the scale. But they very often position themselves to offer something different, even though they don't offer the best price, they provide flexibility, creativity, improve service level, decrease lead time, so these things that's how they differentiate themselves, and it also has a value to it. That's sometimes the reason why we could be paying a premium if, for example, we want to use that supplier for a different purpose.
(Y): Do you find any challenge to go to a global supplier? For instance, different time zone, different languages, different cultures, different ways of doing business?
(B): Nowadays people are international, everyone has Whatsapp, and everyone speaks English. Global suppliers have a lot of resources, a lot of kind of similar governance structures. I would not say so. I don't see challenges coming working with global suppliers. The only maybe kind of complexity is when we as ABI, we're a huge company, when we negotiate with the suppliers we can really leverage our size. When you're dealing with another huge supplier it's a different type of conversation. It’s more strategic partnership, long term view that kind of discussion then leveraging your size to get better condition.
(Y): How do you access your suppliers’ performance? Are there top criteria that you mostly look at?

(B): We are not very good at that, and that's something that we're working on as part of our SRM - Supplier Relationship Management agenda. We're not good on it in almost any categories but we're trying to put in a framework, how to help to measure because if you ask me this five years ago, the best supplier is one that you don't hear about. If you don't hear that means there's no problem and everything is fine. If there are problems or problematic supplier issues, that's the one you want to change. But what we need to do is put in place kind of certain unbiased KPI against which you can measure the supplier, and based on that measure their performance. So lead time adherence, supplier on-time in-full, quality issues many things that you can put. The only issue is how you going to track it and manage it, so that's something we still need to be done at that.

(Y): I see. This is my last question- according to you what factors do you think will be the most important in deciding your strategies in the future?

(B): The number one priority for us and I think for everyone nowadays is supply security, if we don't have materials to produce, it's a huge loss for the company. If we don't have one ingredient to produce beer, and we shut down the brewery. We can pay five times for that ingredient more to get it, and will still be making money. So supply security for us is our number one focus. Because of COVID, because of Russia Ukraine, because of many different things, the availability of different materials has become very tight. As part of our sourcing strategy, what we actively now considering is how do we make sure that we have some sort of supply security guarantees, and also flexibility in case something goes wrong. While at the same time, of course optimizing our commercials. This is also not only in terms of resourcing or supply challenges, but also internally. If we have a recipe for a beer, can we use another type of sugar, do we have also have a Plan A or Plan B inside our specifications or materials that we could use, can we be more flexible. I will be working directly with the producer or working with distributors. What's the right balance between those two? Because distributors dependences the producers for availability, if you're only working with distributors, you don't have the kind of direct connection. All these things are now playing a major role, and I would say maybe lastly, going in future five years is what we see now the prices are very volatile, especially commodity prices. As part of our sourcing strategy, we need to understand exactly what we're buying as much as possible, and what other drivers. We need to understand the suppliers, what exposure they have, and be really smart about how we structure our contracts, and our pricing with the suppliers on the case by case basis, so that's the priority for the next five years for sure.

- **Interview Nestlé**

The interview was conducted on May 9th 2022 with Ms. Lucia Koutnakova, who was the Category Buyer - Raw Materials in Nestle from 2016 to 2019.

(Y) Jui-Ting Yen – interviewer

(K) Lucia Koutnakova - interviewee

(K): I did the category buyer, it was more of a local role, and so definitely I was collaborating with the global category buyers. I can give you the background for this role as well because I was collaborating on a regular basis with them. It was three and a half years ago so just FYI, so I cannot really tell how it is right now, but definitely, I will just let you know like how was it back then.

(Y): When you say local, was the office also in Prague?

(K): Yes exactly. My role was more of the tactical role- the tactical buyer. I was responsible for the Czech Republic and Slovakia. We had four sites, and basically, it was like a role of RPO, from what I understand here. There was global category management for the particular category or potentially 1-2 categories if the scope was not that big. And they were spreading the category and the application of the category to the local buyers. So I was more of the local role.

(Y): I see, and then I saw that your category was raw materials?

(K): I was working on raw materials for direct part of the procurement, and it changed because my role evolved and I was responsible for from the beginning for let's say less complex, so there was like 1 or 2 bigger categories, and then couple of small ones. Then I was just like becoming more senior, so I was handling a bigger categories more complex ones, and also some of the small categories that were locally driven. Basically, we were creating the category on the local level to the category strategy. Just to maybe name a couple of big ones that I was responsible for, the biggest one probably and most complex one was the flavors. You can imagine you have for every chocolate, you have for every bar, you have different flavors that you are using in. It was a huge category. The strategy was that we had five biggest suppliers that we needed to go to when we were in a need for new flavor. There was always this demand that we were just directing to these five biggest suppliers. But these were the global ones, so basically they were covering the globe Nestle. So it was not like Czech Republic and Slovakia were using these five. No it was really we used those across.

(Y): Do you know how these fives are selected? What's the most important factor when you were selecting them?
(K): I was not the one to select them, I just got the strategy. But definitely, you have different parameters, you have different things to look at, so you look at the coverage, which regions or which areas are the supplies covering. So definitely we needed the global coverage. Then of course you look at the financial stability, the financial health of the company. You look at the portfolio, so you need to see the connection with the factories, with the coverage of the production sites. You need to look at if the production sites are in proximity to our production sites, depending on a lot of up those aspects. Definitely also depending on the length of the company staying on the market, so how long is the company on the market. The historical cooperation I would say it was really important.
(Y): Do you think this type of raw material, the demand is stable?
(K): This is definitely the regular purchase that you do. At the beginning we had one-year contracts, but then the global buyers were doing the global negotiations and this was huge, very complex, and had a lot of SKUs. Then due to the complexity, they did the contracts for two years. We were working definitely with the forecasts with the SAP data. So you can fix it on that.
(Y): I see. So other than these 5 categories you go to the major supplier, do you buy other items from the local suppliers?
(K): Yes, and this is the thing of course the historical purchases. For example, we had in Czech Republic, it's a specific type of the candy that we were producing, and it was sold only Czech Republic and Slovakia. It's called “hashlurk”. It's a specific mintal candy, that has really the historical background, a very strong historical background. It's super famous, and we were buying this type of flavor from local suppliers. It’s an extremely specific type of flavor. I remember this specific case because these guys couldn't speak English, and you can imagine the globalization, so we were going really for the global strategies. We wanted to work with the global guys. And this one “garage”, we call them “garage supplier”. They had huge spend with us and they didn't want to cooperate like we were putting in place the global contracts, and we needed a lot of documents. They just didn't want to cooperate in that term. We just couldn't match the flavor with anyone else, or if we would get close, but the price would be somewhere above the cloud. Then we had like other suppliers like this, so then you still have this kind of small ones, that were super specific, and you couldn't really match that with another one. This was really the aim to exchange them or to have at least a backup solution.

Because mono sourcing is always not the solution. It is always very risky, and within the direct scope and within the raw material this is always the riskiest part. So your strategy should be aimed to have a backup solution for sure, especially for the biggest spend ones and the riskiest ones. The case I was telling you about, and this was exactly the example of that. You can have some local ones, but then you really aim to have at least a backup to them because if they just stop producing or they just bankrupt, you are really screwed.
(Y): I see so basically, only very special flavor or only very special thing that certain supplier can provide, then you go to them, but if it's not the case, it will be at a very big scale and then go for a bigger supplier or like a global supplier.
(K): I will add to that. If I stay to this specific category flavors, so what would we be focusing. There are a lot of SKUs, so thousands of those. But when you look at more in the detail, there are hundreds of strawberry flavors. Why do we hundreds of strawberry flavors? Then definitely, one of the biggest focuses was to do the harmonization, at least across the countries, or at least the regional part. Because then again, strawberry is not strawberry exactly, so also different countries they had a different palette of the taste, so then of course it's difficult to harmonize completely across. But at least to try to see because even in Czech Republic, I think we had 15 of strawberries. Why? Why do we need those? So then like these type of projects- standardization. Then there's always the competition because you get the different prize, and then you can compare at least out of the top ones.
(Y): How do you assess your suppliers' performance? Are there top criteria that you look at?
(K): Yes, what we did there was a supplier performance that we were tracking. We were looking for sure at the delivery times, so on-time delivery, that was the main one. We had the split for importance, so we had the ratio of per importance of the part, and on-time delivery was the main one. I don't remember exactly what the percentage was but there's one. Then for sure the quality of the delivery, so if it comes up everything perfectly as it is supposed to work, there is less of the SKUs that we ordered, or something is damaged.
(Y): Do you find any challenges to work with the global suppliers?
(K): Of course yes, I think the biggest challenge, at least for me, when I worked with the global one, is the complexity of the company and the structure. Usually, you have one global key account, if you are big enough and important enough for them. You have one global key account and then he's collaborating with you, and you are aligning on everything, on the prices and RFP and all these. But this is really not the case at every time, because usually you have the different entities, for example, logistics, they couldn't give me one guy that would

just collaborate with me on all the topics. I did a tender for the bigger scope, so we had the scope almost whole Europe. But I needed to communicate almost for every country with a different person. Sometimes they dedicate or usually they should dedicate one person that will be really the spoke for the tender, but then this guy needs to communicate to every scope separately, to just get the feedback, get the prices get everything, like the SLAs. This is extremely time-consuming. When the guy goes to the vacation, I just don't get answer anymore, and I would say the complexity of the supplier itself and the structure. I think that would be the same when you would ask the sales guys - our supplier. What is the most challenging one. We are always as well changing, where everybody has a different scope, then you need to just like reach out to different people. I think that could be the complexity of the structure.

(Y): And how does the sustainability part come into your selecting supplier?

(K): Yeah for sure, sustainability would be one of the main topics, in hand with the prices and the savings, that you need to look at for sure. The sustainability part, is definitely what is influencing when we look at, for example, the logistics, that is very much influencing the proximity. So if the supply is this close to us, then it's perfect because so because we are reducing the CO2, and it has really big influence. We had this rough study, in my previous company, and we were purchasing raw material from Russia, and you are aware that with the current circumstances, it's not possible anymore, specific for this material. We were already of course forecasting or foreseeing that this will happen, that there will be a ban so we needed to react. We were just trying to find the alternatives within Europe or even not in Europe because it's a really specific material, so in South America for example. We try to understand what's the CO2 impact. If we take this plywood material from Russia, if we take it from Europe, and if we even exchange material. So we were talking about the plywood but we could potentially exchange it with the wood or with the plastic material, or taking from South America as I mentioned. The outcome actually was that really to take it from Russia, that's really the highest impact that you can get. It's really due to the transportation part. And for example, the plastic is always taken as a bad one, and with a high impact on CO2. But this particular supplier, they were using recycled polypropylene so recycled plastics, and they were even close to some of the sites. When you look at it from different angles and really the transportation part is having huge impact on that one. I can only agree that could be having a huge impact and the huge influence for the future potentially decisions. Which supplier to use? and which supplier is the preferred one? because it could be it's much closer, so then in that case, I won't be taking the global supplier because it's going from another part of the globe. So for sure, then sustainability definitely it's not only about transportation. It's about the renewable energy, so again we would be for sure looking at the suppliers that are going towards this direction. it can of course goes in hand with the increased prices with some services and all these, then again it depends what would be a bigger priority, and what we want to focus on. So sustainability definitely one of the topics very important.

(Y): Do you have any other topic that you see will affect your strategy?

(K): Yes, definitely after would be the digitization, so putting in place the automation or new systems. A lot about the automatic approach. I think that would be for sure another part to look at. Well then surely, mixing the approach- the circumstances right now happening, we need to take into consideration that we would need to potentially have a replacement of the materials. When we are back into the direct. A lot of materials and the direct ones are coming from Russia and Ukraine. You need to switch the sources, you need to look at the backup solutions. I think that would be another really big influence now on overall categories and their approach.

- **Interview Pepsi**

The interview was conducted on April 1st 2022 with Ms. Lorena Barros, who is the Procurement Manager at Pepsi.

(Y) Jui-Ting Yen – interviewer

(B) Lorena Barros - interviewee

(Y): Could you give me a brief overview of the company?

(B): It’s an international company, we are focusing on beverages and snacks. The snacks segment is strong in Europe, it’s sold more than the beverage. But then in the US, it’s important for the PepsiCo revenue, so it’s half-half, so beverages and snacks. It's a company that has a plant everywhere, around the world we are having $70 billion in revenue. And around I would say that now we are 300K employees worldwide. I mean that’s, in general, the company, but then when you go department by department, so it’s a very fragmented company. There are how so many departments and sometimes things are centralized, and some departments are more working at local levels. It depends on the strategy and the department.

(Y): I see, and for procurement is more centralized or decentralized?

(B): We have a combination of both because we are present in so many countries, so we have a local structure and we require people locally, and then we have another team working more at a sector level, covering more the regions.
(Y): Can you tell me what's your role in the company and what's your key responsibilities?
(B): Yes, I am responsible for northwest Europe Procurement Indirect, indirect is more focused on IT and purchase services. So basically, it's every service we need to procure for northwest Europe.
(Y): What is the category's demand pattern for IT and the services? Is it stable?
(B): I mean as this is known not just focus on one category, when I say indirect, it can go to the HR department, any service coming from HR or fleet, or you know legal or merchandising services, IT. So it's really broad, and not the same strategy or patterns for all the categories, but it's depending on what's happening and nowadays with COVID, and then now this political situation, obviously sometimes the strategy needs to change, and if you ask IT for example or fleet, we are having issues because we, obviously, there is a shortage in some commodities there are not giving us the opportunity to have stock or really did the delivery times are really long, things like that. So it depends on the category but it depends on what is happening in the industry, it can change a little bit.
(Y): Yes, I see. I don't know if it fits in your category, but regarding your sourcing strategy, do you use more global or local or it is a mix of strategies?
(B): It's a combination. In Pepsi, we have a regional team, so they are more focused at the regional level for one category. From that, we also take what is the strategy - what's the strategy for the company, and then we try to adapt or implement that locally. Sure, that can be sometimes that the strategy completely fits in the view, that's fine, but sometimes we need to adjust, and we need to adjust the local requirements because not in every country, you will find the same requirement. Generally, you can do the sourcing globally, yes, and you can have some advantages because of the volume, because of the standardization of the process, for example, we bought sometimes locally, and they have other ways of working that this strategy cannot be implemented 100%. I will say that this is a combination.
(Y): What kind of drivers or factors would push you toward a global supplier or local supplier? What do you value the most when you were selecting suppliers?
(B): When we can consolidate the volume for all the countries and their requirements more or less are the same, so you can take advantage of global sourcing. It's like you are buying one kind of product, but when you have several countries having different requirements, for

example, merchandising, so in merchandising in one country they require only merchandisers, or in the stores only to arrange the products in the stores; in other countries no, it's more a person that will take some responsibility on selling or checking if the stock is there or not, but not revealing the shelves, so when that happens and it's difficult to find a single supplier that can have people in all the countries, meeting the request of Pepsi and what normally happened is that for one part of the countries that are involved, the suppliers can help or can provide services, so that is when you go locally because you can have more benefit of doing that because it's really a specific service that you need to customize locally.
(Y): How do you assess the effectiveness of your sourcing strategy?
(B): Well basically, when you have this kind of tenders, normally you should have also local players, and that can show what is the benefit of going global when you go global to have more leverage to negotiate. Because obviously, the total business is more representative than only one portion locally. So if the supplier is an international supplier, you can negotiate with others instead are relevant. How you can assess if it was simple tender or global tender is the savings. I mean the spend that you are having, basically, that's the big part that obviously as procurement that we are focused on. But then obviously there are other things like services or tools, that we can have report online or things like that, and then maybe local companies doesn't have the capacity to invest on that kind of tools or that kind of technology.
(Y): Ok. Is there anything that will trigger you like this is not OK with the supplier, and I will have to change?
(B): Yes, you mean in terms of sourcing?
(Y): Yes, or normally speaking.
(B): Well, normally, it depends on the internal policy. Normally, you have a few years that are accepted by policy and after that, you need to tender. So every two years, for example, we need to tender the service. There's an exception of course, and then you need to prove, or you need to justify why this going to tender. As per the rule you need to do, another way is also to confirm that the tender is needed or the business is requiring a new service, or the business is not satisfied with the service level of the supplier and we need to see, remedy, or take what we can do. But if it's not any way to show the situation, so we need to tender and we need to find a solution for our business.
(Y): I see, and what are the biggest challenges to your sourcing strategy, and how do you deal with them?

(B): If you ask me today about that, I will say that is the price increase at least three times, so right now the market in general in all the categories is really changing every day, prices are increasing, so it's really difficult to fix prices or to have a certain agreement that we will have for one year. I would say that's one of the challenges, and obviously, the other one is about delivery time. When we are going to receive it, so it's really we need to react fast, and at the same time, we depend on what is going to happen with the shipment. It's going to arrive on time, yes or not. That's what we are talking about, I can get the products right, but we are talking about service. But it's more about the cost of the labor, so again it's also a factor that is impacting a lot. Inflation is really impacting everywhere.

(Y): You mentioned the delivery time, and there's always a tradeoff between the cost and the delivery time, and usually how do you make the decision based on this trade-off?

(B): Well, that will depend on the urgency of the item. If it's something that we can wait for, there's not needed immediately, we don't need to pay more for that. This is just one situation, if we see again is going to be delayed. Long-term is not fine with us to continue that way. I cannot say that is one straightforward answer, and you need every single tender, every single project. You need to check where is the situation, can we maybe have the service continue and just wait a little bit? Can we postpone some contracts that we have, for example, the company cars, that we don't need to wait for the new one. We are just extending the contracts right now. You need to understand where the situation is, but I will say that you can't take that decision if it's urgent and this is going to deliver the return of what is going to give that is higher than what you are obviously extra payment than you are having from a lot of suppliers for example.

(Y): OK, so this is the last question. According to you what factors will become more important in determining your sourcing strategy in the future? Maybe five years.

(B): Do you mean what's going to be the criteria to select the suppliers?

(Y): Yes, like you will go for any changes? Global or local suppliers for example.

(B): I mean what you mentioned about changing from local to global before and now coming back to the local, I don't see that really strong arrived. I mean again I think it's a combination of both, because there are services that for sure is really difficult to standardize in a global culture. You can have some master agreements with global agreements let's say, where are going to be the principles. But when you go really this to describe what's the service about most cases you would need to go locally, and locally is like another kind of negotiation or extra negotiation I would say. For me, how I see that is a combination of both. There are services in global companies that, yes, we can negotiate the base price globally. There are several categories that you can do that but there are still some others that you will need to go to locally.

(Y): OK, so you are not yet maybe seeing the trends of sustainability taking more importance in the strategy.

(B): Sustainability is important, yes, it's something really important in our company. We have a strong target for that, and we as procurement are also implementing or adding sustainability in our sourcing. But we are looking more not only about a supplier is located in our view or close to our view. Because you can save transport regarding stainability or CO2 missions. Then maybe you will pay a little bit more but there's more than that because you can have a local company that is really not following other aspects that are in the sustainability part. It is more than where the supplier is located, we assess what are the measures that those suppliers are taking. Whenever he's the supplier in China, or here in Germany. We are considering, we are asking, we are questioning information about what the strategy of the supplier is, what they are doing to contribute to the sustainability pillars, and depending on that, yes, we are considering. Because it's also now, other social activities are they doing to contribute to the communes and so on. I won't say that we as procurement will change the location or where we source because of this stainability. We are taking a bigger approach to that.

- **Interview P&G**

The interview was conducted on March 23rd 2022 with Ms. Anamaria Morega, who is the Global Purchasing Manager of Capital Equipment/ Automation & Robotics category in P&G.

(Y) Jui-Ting Yen – interviewer

(M) Anamaria Morega - interviewee

(Y): The first question is - could you give me a brief overview of the company?

(M): OK so currently I work for Procter and gamble, and I I'm based in Brussels normally, but we have different headquarters in different regions. I work in purchases for the moment, I work for capital equipment, and it's a very sexy field. I've been in the company for two years. P&G is a FMCG company, it's a fast-moving consumer goods company, and they specialize in a wide range of personal care, hygiene, home care products. They were founded in 1837, I think by two brothers in law candle maker. They started in a completely different field but over the years they expanded the quiet new brands, and now they produce some of the most popular brands for certain types of products for feminine hygiene. You probably know Always, or for household, it's a Draft, but that has different names in different countries. It's very big, and it has different hubs across the world. We have for example the Brussels innovation center, but we also have the headquarters in Cincinnati. They are also present in Switzerland.

(Y): What is your role in the company? What are your key responsibilities?

(M): So my key responsibilities, I'm currently a purchase manager- global scope, and I I'm responsible for “End Of Line”. Basically, if you would pack up pampers, then you have a making line that makes the product, but you also have a packing line, and the packing line has different areas, so you would have the feeling that you put the pampers into the bags. Then the bags would get let's sealed and move on to the next part of the packing line, which we call it secondary packing. So those bags would be put in boxes or cases depending on what we send them, and then those cases would come to the end of the line, so the boxes of let's say 6 bags of pampers would be put on pallets. Normally it’s wooden pallets, wooden pallets stacked on top of each other and then stretch wrapped to be transported. So my scope is that specific side of the packing, which is the EOL. I’m responsible for buying the equipment that does EOL, but I am also responsible for automation for emerging markets. For example, we have a lot of plants in Eastern Europe or in Asia, where it's either manual or they have very low speed equipment, so there I would also be responsible for automating that part of the line, and a little bit of a robotics scope.

(Y): I see, so you purchased bigger machines and all the machinery things. What are the category’s demand pattern and the portfolio?

(M): For capital equipment in general, for example, I used to work in AB InBev before Porter & Gamble, and there I was responsible for marketing materials. So for example, when you would put shampoo in the supermarket, you normally put them on the cardboard displace that is sometimes fancier for Christmas displace. So I would be responsible for the displace comparing that with equipment, the demand is very different. Because for a display it's more of the last minute, let's take advantage of this situation, or sometimes of course if it's for Christmas or for World Cup you prepare in advance. But normally with marketing materials, it's a little bit of a more dynamic demand for the scope. For capital equipment, normally I buy the palletizer and for the next 20 years, probably the palletizer will work perfectly, or the incumbent vendor will come and service it or maintain it as needed, but it's not that if it breaks down let’s buy another one. It's more of let’s ask vendors to come and fix it. But with COVID, for example, the demand has increased a lot, for example, we have months where people could not go to work, or they were not allowed to. So the demand has increased at least for equipment and for automation.

(Y): I see. Regarding your sourcing strategy, do you use a local supplier or global supply, or a mix of sourcing strategies? What's the factor you would consider?

(M): It normally depends on what you buy. As a purchase manager, you have a little bit of both because for example, I'm responsible for the whole scope globally, but that doesn't mean that all the equipment we buy is from global vendors. Global vendors are normally the vendors who can send equipment to every part of the world. But sometimes, for example, for COVID that was heavily impacted in terms of can the vendors go to the plants? For example, if the vendor would be based in Germany, then can the vendor go to a plant in Asia and maintain the equipment or install the equipment? Because of course, they have to go and install it too. It's a little bit of both the scope is global but the strategy is a combination of both global and local vendors based on the market conditions, based on language requirements. For example, and this was the same for my previous role for Russia. It's sometimes more difficult to talk to a vendor in Russian, then it's impossible. So there you would have local buyers normally that either source it with a local vendor. But if it's a global vendor then it comes with a global purchase manager, so it's a little bit of a combination of both depending on what you're buying, what does it need to go what are the market conditions at the time, what is the budget of course, what are the requirements. For example, for equipment, it's often more difficult to buy it from a vendor that you've never worked with before, because the equipment has to be at certain standards. You cannot just by from whoever, so they has to be at certain standards. Then you need to qualify that vendor for the standards which often takes a long time. For example, in my previous role if we had to buy T-shirts, because I also bought the T-shirts for the World Cup. If you would have to buy T-shirts, then that doesn't really matter where you buy from, it's often you look at the ratio of price versus quality. But of course, it's if you have the time and your source it in advance. Sometimes, you don't have the time to source it in advance, sometimes the business comes to you and says that we need this yesterday. But if they plan it in advance, then you could say, for example, for T-shirts we could say - let's invite vendors that have a production facility in China. It will take longer to deliver it because you also don't want to pay for air flight. It's more expensive than ship containers. But you could say let's order this from China or Bangladesh for example, because they were often supplied Europe. But if I

know I don't have the time, then I would buy it from the vendor from Europe because I don't see the business can wait for a 2-month delivery time.
(Y): I see, but for if it's for the things we're buying now - the machinery equipment. How are the cost and the flexibility like you said. How's the balance between these two?
(M): When we purchase the equipment, it's more than just cost and flexibility. You also look at the relationship that you have with that vendor, you also look at the performance of the equipment, and sustainability becomes a more important criteria for the procurement population as a whole. So you also look for whether the equipment is sustainable in a certain way, or they are reducing their carbon footprint. So the procurement scope evolves with the market normally, as you mentioned as well with the globalization, so every time now, at least in the companies I have been in, is not just about the cost and time. You also look at other factors which sometimes overweight the cost. It could be that it's not the cheapest vendor, but you know that the relationship you have with them is very good because you've been working with them for X amount of time, and you know that you already have X amount of equipment installed in plant ready, so it wouldn't make sense to bring a new one. So it's a little bit of a balance between what the business needs. When you saw something you need to ask yourself- what is the business? what do they need?
(Y): I see. How do you access the effectiveness of your sourcing strategy?
(M): Normally we make a five-year strategy, five year around I will say it's a bit too long because you have to look every X amount of time over to see what's changed, and what's still relevant for the current strategy. I would look at if the approach we are taking still relevant, for example, do we still want to only look at the vendors that we are the incumbent vendors? Do we have the time and resources to qualify vendors are showing emerging countries? Because what I noticed and it's also something I noticed in my previous job, is Asia has very good vendor pool for purchases across different scopes. Of course, it's more about physical things, for example transport, you would have to have a local vendor for transport. For example, in most cases you need more of a local strategy with a bit of a global umbrella. But for equipment itself, I would look at active current vendors still meeting the requirements of the business, because you see how the business is evolving, and for example, if I would have a vendor that only provides one type of equipment, let's say if I would have a vendor that would provide only Fiat cars, and Fiat cars were fine until now then we move on to Mercedes sort of thing, then would that vendor still be relevant or not. It is the same for equipment, for example, in EOL you have different types of palletizers. You

have a traditional palletizer; you have a robotic one and a hybrid. The traditional one is very big and bulky but at very high speeds. The robotic one is more for when you have layout issues in a plant, for example, it can be very compact but it doesn't quite find the same amount of speed and payload as a traditional palletizer. I would look at what is the business moving towards - are they moving towards more increasing the capacity, increasing the speed, increasing the payload? Or are they looking more towards agile or flexible types of equipment that they can upgrade or downgrade? Because with the traditional palletizer you cannot really do this. You can upgrade it but it's not as flexible as a robotic one. For example, a hybrid palletizer would have the capacity to handle multiple SKUs, so instead of one product normally you just have one product coming down the conveyor and being palletized. But for a hybrid product, you could have even two or three SKUs that come and they get palletized. So of course, that is a little bit in between the other two. It has also high speeds, it handles multiple SKUs, so it provides a little bit of speed and flexibility. When you look at the strategy, you sort of look towards what the business is moving. You look at the cost- how is the cost evolving over the years. But for example now if you look at the supply chain is under a lot of strain because of the raw materials and the components, so there's a lot of shortage and of course prices are going up across industry. If I would be to look at the strategy today, it wouldn't be a fair comparison to say: Oh yes the vendors are increasing the prices because of the supply chain situation, because it's not something that will probably last for five years. As soon as this crisis ends, then the prices would go back to an acceptable amount of increase. We also look at how the relationship with the vendor evolves. It could have that you had a lot of projects with someone, and they underdelivered constantly against the KPIs of the project. Then you would also say OK maybe they're not a strategic vendor anymore, maybe we move them more into a competitive category, so you will use them for competitive bidding as opposed to making a strategy.

(Y): So l based on the nature of the product, is it true if the demand is more stable then you can somehow use a global supplier because the demand is not moving a lot. But if it's like you know innovative then you will tend to choose the one that's closer to you because they could you know kind of send it faster? Is it part of the decision-making?

(M): For equipment, I would say no. Because for example, even when you buy parts, of course for equipment you need spare parts to change machinery. When you buy parts the demand it's fairly stable. For example, for some reason your global vendor that you buy the parts from, closes down tomorrow, it's an extreme case but then, of course, you need to find somebody if your machine is not working. They need to find somebody that can do it as fast as possible, so it could be the guy from the corner of the street, you can provide the same part, then you would do that. But unless there's an outlying situation, out of the normal business management, then you don't really do that. For my previous scope for marketing materials, the demand is not as stable. It could be that you see an opportunity in the market to do a promotion for whatever product you're selling. Then you say OK, Marketing came up with this brilliant idea for brands that are more active on social media. Sometimes they jump on an opportunity that comes at a time, so you quickly need to make promotional materials and you cannot have the vendor that has to produce in Bangladesh and they deliver it to you in three months from now. So that of course you go for a vendor that is there in the same country for example, that can deliver it fast to you. But for equipment, I would say that that's not applicable.

(Y): I see, I see. I think it's the last question. According to you, what factors will be more important in determining the sourcing strategy in the future? Maybe in the next five years.

(M): I would say one of the factors that I've seen popping up a lot is sustainability. It's changing or at least it's forcing a change in procurement overall, it’s move away from a transactional approach to more strategic approach depending on what you buy. So sustainability would be one. I would say, information security would be another. If you look at, for example, cyber security become a pretty big pretty big field now. It's expanding a lot, but the opportunities to harm companies are also expanding a lot, so I think that would also pick up more in IT technology purchases. And even, for example, if you look at products sometimes have a QR code on them or promotional item that you could sell with the QR code, so then that would also create a lot of opportunities to use that for various purposes. That would also become an important thing. I would say data analysis. It's already a bit more established than in the other two. But I think the way we visualize, the way we store, and let's say have historical data or what we buy is going to become more and more important. Some companies are better than others at this. If you want to have a fair relationship with the vendor, but there’s also a fair relationship towards your business partners, then you would need to have a good historical data on what has the same item cost. Of course when you look at the equipment, it's not really apple to apple comparison because you are buying different versions of the same. So you couldn't say: buying the first iPhone it was a X amount of EUR 20 years ago, and now it's ten times more, so it won't be a fair comparison. But at least you have a price evolution, and you can sort of make estimations for the future. I would say the last thing but not necessarily last as in importance is the relationship with the vendors, so supplier relationship management. It would be part of a well-established strategy for purchases because depending on what you buy it's better to invest in long term strong relationships with your vendors, then have a transactional - if it's not you with somebody else approach. So I would say these things, and of course as purchases this is your job to look at costs, and find the best solution the best proposal from the vendors. But if we want to be not just a transactional support function or operational function, then we'll need to take a more strategic approach to what we buy, and how we buy it, and also look at, for example, one more thing that actually would have to be part of the strategy would also be fair sourcing and diversity among your vendors. Fair sourcing because if you Google it right now you will probably find companies that had lawsuits or issues with child labor and unfair conditions in their factories, so that should also be part of the strategy, depending on what you buy of course. But for example when you buy T-shirts produced in a certain part of the country, then you would need to check the vendors that are holding certain certifications and proof that they offering a fair wage to their workers, that are not employing children, for example, the conditions that they work in are not toxic or the factory is not going to collapse. These checks are also normally should be done when you buy the product, before you buy it, and depending on what you buy of course. And also the diversity of the vendors, because there are a lot of companies out there that are women or women-lead or minorities, so it's not that you need to make an active effort to positively discriminate for those, but it's also to empower and enable those companies to be part of the pool of vendors that you look at.

(Y): Sorry, just one more question to follow up on this sustainability. Usually, how do you measure, or do you ask them to provide certain data, or there is third party validation? How does the sustainability criteria put in the orders among other criteria?

(M): Well, it depends. If I would be buying displays, then to put our products in the supermarket for example, then sustainability might be one of the top three because that displays at the buying will most likely be thrown away afterwards. So you would look at it the pool event that you're buying it from, for example, do they provide you a display that is done with less cardboard than the other vendors. Sometimes you have these small innovations that really make a difference. So you could have somebody that provides the same ability to support the product on the display, but at 75% of the materials that go into that display, so then of course from a sustainability standpoint that would be a more green approach to making that product. Or for example, when you make a promotional item like a T-shirt, if I would be buying this T-shirt from certain vendors, then I would also look at how much water are you using? Do you support the communities? Some companies have a community where they have a factory. They have a community support program. Do you have such programs? How do you ship the T-shirt? Is it by air by sea? Can you do it by train? If it's shipped from China can you do it by train? Or are you going to send by ship container, which a lot of people actually don't know but the sea transport is very harmful to the environment, and they produce a lot of CO2. So if you look at that then it's easy to measure, it's easier to measure. Or if you buy a transport service, then you look at the fleet, you look at, for example, shorter distance delivery. Some companies use electric cars because they can, but if you transported the across ten countries then maybe it's not the best one, but within the country, some transport companies do it. So that's easier to measure and it could be one of the top three items that you look at. But for example, when you buy equipment, it is not as easy to measure. You can look at the efficiency, at the amount of steel and raw materials that go into that equipment. But often equipment is so heavily customized depending on the product that it handles, it's difficult to measure to have an apple-to-apple comparison because even if I would say I want equipment that makes this cup, then I invite inventors they will all give me 10 different types of equipment that are done in different ways, so it's very difficult to look at that. So from this perspective, then sustainability wouldn't be the top three. It would be maybe the top five.

- **Interview L'Oréal**

The interview was conducted on March 18th, 2022 with Ms. Miriam Calpes who is the Raw Materials Secure Procurement Leader in L'Oréal.

(Y) Jui-Ting Yen – interviewer

(C) Miriam Calpes - interviewee

(Y): Could you give me a brief overview of the company?

(C): I work at L'Oréal, a cosmetics company worldwide. It's a French company but it's very international. It's the first company for cosmetics around the world in terms of business. I can say, for example, we have more than 40 brands and more than 40 plants producing, so we are mainly manufacturers of cosmetics products. We have a different division, there are normally 4 divisions- we have the luxury one, the consumer goods, the ACD, which is active cosmetics on the products that you can find in the pharmacy, and the last division is PPD, which are professional products that you can find in the hand dressers. We have those four divisions and within those divisions, we have several brands. In fact, the strength of L'Oréal is really to buy small brands almost startups, or at least local brands, and internationalize those brands and make them famous around the world, and really developed those brands. L'Oréal is doing business in several areas. We have other than the skin care products, we have the makeup products and hygiene, so it's very complete. In fact, the goal is really to be in the cosmetics industry but everywhere in terms of distribution channels, so that's why I was explaining to you the four different divisions because every division is distributed through different channels, so we try to do everything on the channel also using the e-commerce. Every division has its specificity, I was talking about pharmacies, and hairdressers, for example, consumer products are mainly sold in Carrefour or Walmart, and luxury is also distributed through the travel retail. For example, all the shops that you can find at the airport. As we saw with the Covid, when prices that's impacting the travel retail, so the airport and everything that's related to the travel. Then we can be strong through another kind of division, for example, we were like selling a lot from the ACD one, so active cosmetics through the pharmacies during the COVID. When in summer it is not going well, at least we can compensate or collaborate with another one, so this is really the strength of L'Oreal in terms of distribution. And also, in terms of the offer to our customers. We had also some trouble with the makeup, I think it's no surprise for anyone. But then we compensated with the skin care and hygiene because people were staying more at home and taking more care of the skin, so this is the goal of the company.

(Y): Thank you, what is your role in the company, and your key responsibility?

(C): My role is called Raw Materials Secure Procurement Leader. It's a big title but in fact, what I do is that I take over the factories and the buyers role when we have trouble getting material from our suppliers, meaning that when there's not enough material at our disposal to serve all our needs internally, so one of the needs from the plants. I'm taking over the supply and on the situation of the raw material. The goal is to take the raw materials that are, we call them in crisis, we have several kinds of criticality levels. Our main goal is not to impact the business because I'm really at the upper stream, meaning that normally my role is that the business doesn't see me, when they don't see me and they don't know that I'm working, it's that I'm working well. My goal number one is to avoid a business shortage meaning that I avoid the shortage at the shops, even also through the e-commerce on the website and so on. I'm really focused on the raw material part, so you see, for example, if you take a bottle of shampoo, there are two things: the formula, which there's a lot of raw materials I'm buying, and using different kinds of concentration, and then you can have the formula. Then the packaging, and when you put the formula into the packaging, you have the finished goods. So my role is that the finished goods are not impacted due to raw materials. The raw materials are provided by suppliers, and we have some risk also depending on if the raw materials are mono-source, for which we only have one single source, or multisource, depending on the location of the supplier. I work in partnership with our top risky suppliers to try to find solutions to avoid prices, avoid shortages, and avoid shortages all along the chain. We also with the research people at the labs, where they also try to find new raw materials that could be maybe more secured, and also with the buyers we try to look for new suppliers to diversify and be more strong.

(Y): I see, and what is this category -raw material’s demand pattern?

(C): You have a lot of raw materials, in L’Oréal is several thousands. You have different categories depending on the origin, for example, natural raw materials, chemicals, actives and so on, and so it's really depending on every single raw material and every single supplier. But I would say that it's with a lot of spikes, depending also on the demand and it's complicated to anticipate the demand and to have a good forecast system because we have a lot of runs, and the majority of the brands that are growing right now really depends on, for example, on social media and so on. It's complicated to anticipate, and we see an impact in the upstream with our suppliers when the demand is changing a lot down streams in the market.

(Y): What’s your sourcing strategy - usually use local suppliers or global suppliers, or it's a mix of both?

(C): It's a mix, when you say local you mean in the same continent?

(Y): Yes, like proximately just closer to where the factory is. Do you see why it’s choosing which one?

(C): The first reason is the know-how. Because L’Oréal is a very innovative company. In fact, we differentiate from other companies because we try to launch every day new products to our customers, and be really innovative. But this has a cost, meaning that all the raw materials, or the packaging, or the finished goods, especially packaging and materials, not a lot of suppliers can do this. In some cases, it's very new technology, biotechnology and so on. So I would say that first is the know-how. We do a screening of the worldwide of where is the know-how exactly, which suppliers can do this. Then there's all the classic process from the buyers with the award, and in this award, we put the quantities that we have, so the supplier needs to have enough capacity. When we have several suppliers, we can distribute the capacity through those ones, but we need a minimum capacity from the suppliers for us to be interesting to work with them, and it's the same the other way. Some suppliers don't really want to work with us if we don't have enough volumes. So I would say know-how, volumes, then the price of course. Then everything that the buyer is putting in the award, sometimes we ask for safety stock to be built and so on. It depends on in every case, but normally every year the buyers they do a new award, and they put some conditions, and when the suppliers fill all those conditions then it's OK we can work with them. But I would say Know- how, volume, in some cases location, we take this into account now especially after Covid and the price.

(Y): I see, and how do you assess your suppliers' performance or if it meets your strategy?

(C): There's some business review that we do once a year with the suppliers, but I guess that this is a very classic in all the big companies with big suppliers. Every year it's more like a buyer thing, I'm not really a buyer but I work very closely with them, so I know more or less how this thing is done. So once a year, there is some KPIs I guess that now they are including the sustainability KPI, or at least reducing of carbon emissions, so this is now one of the KPIs, also price, also the lead times. Lead time is very important, there are some people dedicated to measure the lead time by supplier and to raise an alert when the lead time is too long, and then the quality also. This is very important for the performance because we have a impact on the people where people are using our products, it's really related to the health, so we really need to be perfect in terms of quality and regulatory. Then in terms of the supply chain, we compare the most like common performance indicator is did they delivered what we ask in terms of quantities.

(Y): I see. What are the biggest challenge in the using a global supplier or a local supplier? Do you find any challenges?

(C): With the global suppliers, the challenge is the culture. In some cases, for example, with the Japanese suppliers is complicated to work with when you're from Europe. So in some cases, the local suppliers are managed by the local teams, the local buyers we have teams in the in the US and in Asia, also on top of Europe. So we try to let every zone manage the supplier, but it's complicated because in the majority of the cases the raw materials are common in a lot of finished goods that are going to a lot of countries. So I would say culture. Quality is a challenge, we face some tensions due to the quality, but I would say that it's not more now than before, and it's really depending on the situation. What's complicate is the lead time because currently I don't know if you're aware, but transportation is very tense worldwide, because the people travel less since two years, so there's less air cargos. It's complicated for this. We have shortages in some materials that are used also to do the packaging to transport the raw materials, for example, the wood, the steel and so on. In some cases, we have raw material but we can't transport it or there's delaying the lead time, so this is very challenging. What's the most challenging for us is to try to get a good forecast and communicated to the supplier because the market is changing a lot every day, so it was true maybe two months ago it's not true in one month, and so we will need to be very aligned and have good communication to the suppliers because we need to give them visibility, and in some cases even ask we don't really have it suppliers needs in some cases also anticipation one or two years, because you know we have, for example, natural raw materials, and we depend on the harvest, and the seed is now and in two years be a flower, but we expect now that in two years we'll have ten metric tons of flowers needs, and in two years is the triple. But the supplier didn't put enough seeds, so this is one of the challenges also, to be able to anticipate the volumes in a world that's constantly changing, but from raw material perspective, and it's the same for the packaging, we need anticipation because in some cases also supplier needs to put some investments, but they are not going to invest if we don't really commit on the quantity, so this is the main goal.

(Y): Do you find any challenge with the local one?

(C): I'm not an expert at price so I cannot say. I guess that there's price difference due to the cost of the people per hour. In fact, L'Oréal is involving a lot in solidarity sourcing project, meaning that we try to source locally a lot, and it's you know as a big group we also have a big challenge on sustainability because we have also this role it's also a reputational risk if we don't commit and sustainable things now. So the trend is for sure to try to source more locally, but it's complicated to do it, it will never be 100% because like I was saying to you, we tried to put every day or every week new products in the market, and this is not possible to offer different things to our supplier only using the know - how we have for example in Europe. But it's the goal to try to source more locally because even for the lead time and we see a lot of climate problems in the US, or storms. We also had the end of last year, flooding in Germany. And we have the war now, we had the covid, so if we are sourced locally, that's the case of some startups that are entering the cosmetics field, and they are winning a lot of shares because it's more easy for them and they survive the COVID thanks for these and so on. But we will never be at 100% due to the innovation that we need to put into the markets.

(Y): So this is the last question. According to you, what factors will be more important to developing this sourcing strategy maybe in the next five years?

(C): Internally you mean?

(Y): Yes, for L'Oréal.

(C): It's to be able to give visibility to the suppliers because suppliers are now quite tense in some cases, at least the big suppliers, in some products that are used in all the formulas on hygiene and cosmetics. And also even the water, the glycerin, even the very basic raw materials, we are going to miss water maybe not in five years, but in 20 years we're going to miss water, so for example, we need upstream to try to adapt to our products to these trend that we see, or we are going to miss water now maybe in 2-3 months we are going to miss glycerin, and due to the Ukrainian war. But for the next five years, I guess it is to try to better understand our consumers and the volumes that we are going to need to be reliable for the suppliers, and that the suppliers want to work with us. Because the suppliers are now willing to work with the customers that give them the best forecast. This is the main challenge because I'm not sure that we are going to be able to do it, so if we are not able to anticipate this, we will need to be more reactive and more agile, so this is the second challenge, meaning that we are going to work a lot to find new suppliers new raw materials, especially from the research side- research and innovation is where the scientists are. They are constantly trying to adapt and on the one side finding green raw materials, and on the other side anticipating the fact that maybe one day we won't have enough of this raw material, or the supplier doesn't want to work with us anymore. for the next five years, we need to be agile, but we need to anticipate that it's always the same I don't think in five years it would change a lot but the forecast you know on these things.

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