GLOBAL SUPPLY STRATEGY AND KEY DRIVERS IN MULTINATIONAL COMPANIES

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ABSTRACT

Over the past few decades, strong competition and globalisation featured by world markets have led companies to pursue internationalisation strategies for their supply management in order to effectively support their globalisation process. Current literature shows how significant global sourcing and purchasing strategies are for global supply strategy (GSS) development –specifically when related to supply globalisation purchasing decision centralisation.

Nevertheless, other dimensions are discussed as relevant for supporting GSS deployment, such as Buyer-Supplier Relationships and Headquarters – Subsidiaries Relationships. These are regarded by many authors as key issues to support global supply development and to guarantee adequate performance.

This research, a sample of seven Italian MNCs operating in Latin America’s MERCOSUR (Southern Common Market) region, aims to explore the process of GSS definition and development, by focusing on the key dimensions and by identifying the driver criteria used in each case, as well as their impact on decision-making processes.

Keywords: Global Supply Strategy, Global Supply Relationships, Multinational Companies

1. Introduction

There is wide agreement in the literature about the relevance of international sourcing strategy as a key competitive factor for companies seeking globalisation, considering such strategy to be a purchasing management approach focusing on supplies from vendors in the world market, rather than restricted exclusively to domestic offerings (Petersen, et al., 2000; Trent and Monczka 1998, and Steven, 1995). Thus, the notion of “international sourcing” mentioned by these authors describes the level of supply globalisation in companies’ purchasing strategy, as related to supplier source (Levy; 1995; Giunipero, 2000; Trent and Monczka, 2003).
All the same, the literature discusses the limitations in international sourcing strategy application when companies lack an integrated and coordinated management of all transactions between subsidiaries and supply sources around the world. Depending on their globalisation levels, companies need to develop a global purchasing strategy based on the integration and coordination among materials, processes, designs, technologies, and suppliers across worldwide purchasing, engineering, and operating locations (Monczka and Trent, 1991; and Stevens, 1995). Therefore, although both supply management strategies (international sourcing and global purchasing) entail foreign supply, they differ in the degree in which global resources (supplied materials, technologies and know-how) are effectively coordinated and integrated to respond to global demands (Johnson and Wood, 1996; Dobler and Burt, 1996).

In turn, according to the models developed by Monczka & Trent (1991 and 2003) and Rajagopal & Bernard (1993), it seems that, as companies move towards globalisation in response to greater competitive pressures, global supply strategies evolve through several phases or stages (from a domestic purchasing scenario to global sourcing, through an intermediate international purchasing stage) featuring different purchasing strategies. Despite these models discuss each stage in the globalisation process as uniform sets of strategies which evolve form domestic to global supply, many authors discussed how global supply strategies are actually made up of a number of interrelated decisions.

In particular, Buyer-Supplier Relationships and Headquarters – Subsidiaries Relationships are regarded by many authors as key issues to support global supply development and to guarantee adequate performance.

In conclusion, while the relevance of Global Supply Strategy for Multinational Companies seems to be widely agreed upon, there is less evidence of a comprehensive model of the interrelated dimensions that are needed to design a GSS. In particular, a key question that seems to be neglected by the literature is whether these decision areas are closely interrelated
with each other when companies develop their GSS, thus evolving together from domestic to
global vision, or if each decision area may present different stages of evolution, thus shaping
alternative models for Global Supply Strategy definition.

2. Literature Background

2.1 International sourcing and global purchasing

One of the key decisions concerning the strategy and organisation of companies operating
across different countries is where and who to purchase the materials, goods and services
needed for their activity. The first issue involved in this decision is the level of
internationalisation of the supply source, the main alternative being global or regional
sourcing, when suppliers provide products or services to subsidiaries located in a specific
region or throughout the world, and local sourcing, when suppliers provide products or
services exclusively to a single subsidiary.

Major reasons driving companies to pursue international sourcing strategies include (Steven,
1995; and Fagan 1991):

- Domestic unavailability of some materials;
- Poor quality materials at domestic market;
- Higher local prices;
- Low domestic technological standards;
- Compensation and counter-trading.

The evolution from local to global sourcing is described by the literature as a process
entailing different levels of involvement in internationalisation, and different types of
advantages perceived. Many authors, however, couple this process with an increasing level of
centralisation of purchasing decisions within the company. Purchasing Location strategies
refer to this dimension and can vary from central purchases, involving key decisions made by
headquarters (associated with suppliers’ certification and selection, price negotiations and
agreements, and long-term contract design and elaboration), to local purchases, where key decisions are made by subsidiaries.

Although these two dimensions are separate in nature and refer to different strategic aspects, they are discussed in relation to each other in many models presented by the literature. Joining both dimensions, McMaster (1983) defined four global supply strategies with distinctive objectives and practices that responded to specific purchase decisions and internationalisation stages and zeroed in on global sourcing for a general strategy:

- **Traditional Procurement Strategy**: a derivative and purely operative function.
- **International Purchasing**: looking for alternative sources in foreign markets, companies manage to get required materials at the lowest possible cost.
- **Strategic Procurement Policy**: these policies are used to ensure proper supplies and to find remedies for other problems as well.
- **Global Sourcing**: companies pursue this strategy to turn purchases into international transactions and worldwide operations, thus exploiting global resources.

Rajagopal et al. (1993) describes four stages that build sourcing internationalisation processes. Each of these stages also involves a clearly-defined strategy related to purchasing management centralisation, going from buyers at subsidiaries to worldwide business units. These four generic scenarios may be described as follows:

- **Domestic Purchasing** – Companies purchase in the domestic market. Local sourcing decisions are often made on the basis of custom and regular practices.
- **Experimental Involvement** – Companies realise the potential benefits of external sourcing, but not as thoroughly as to embark on systematic search and involvement.
- **Active Involvement** – Companies consider alternative supply sources and search for sources and materials in other markets.
• Committed Involvement – Companies develop global information networks on general supplies and are flexible to implement procurement strategies.

In turn, and according to the author, international sourcing strategies feature five different market entry alternatives to internationalise purchasing processes.

Similarly, Trent and Monczka (2003) describe international purchasing and global sourcing strategies as a series of evolving levels in a continuum. For them, sourcing internationalisation is accomplished when companies move from exclusive domestic purchasing to globally coordinated and integrated materials, processes, designs, technologies, and suppliers. The levels involved are:

• Level 1 – Only domestic sourcing and purchasing
• Level 2– International purchasing only when needed
• Level 3 – International purchasing as part of global sourcing strategy
• Level 4– Globally integrated and coordinated sourcing strategies at different locations
• Level 5– Globally integrated and coordinated sourcing strategies at different divisions

This model is based on previous contributions by the authors that describe how global sourcing and international purchase evolve. In addition, Monczka & Trent (1991) described the four phases of supply source companies undergo in their transition from domestic purchasing to global procurement:

• Phase 1: Domestic Purchasing Only
• Phase 2: Need-Based Foreign Sourcing
• Phase 3: Foreign Suppliers as part of Global Strategy
• Phase 4: Integration of Global Sourcing Strategy

These phases are coupled with a parallel evolution in their purchasing strategies to fully integrate and coordinate their worldwide requirements into a consolidated global sourcing strategy. These strategies are:

• Strategy 1: Domestic Buyers for International Purchasing Designated by the Business Unit
• Strategy 2: Subsidiaries or other Corporate Units provide international sourcing assistance
• Strategy 3: Establishment of International Purchasing Offices (IPOs)
• Strategy 4: Assign Design, Build, and Sourcing Responsibility to a Specific Business Unit
• Strategy 5: Worldwide Integrated and Coordinated Global Sourcing Strategy

According to the authors, firms employing strategy 1, 2, or 3 are in phase 3 of the global procurement process. Firms employing strategy 4 or 5 are operating in phase 4.

However, when companies use their global expertise and accumulate their global requirements, performance enhancements go beyond direct international purchasing. Thus, the models drawn from literature seem to indicate that the supply source globalisation required by the world competition faced by expanding companies is closely related to a purchasing strategy evolution based on centralisation (from largely autonomous subsidiaries to highly centralised corporate buying units). This is clearly seen in the fact that the greater resource coordination, alignment and integration capabilities required by global sourcing processes (world suppliers) become more effective when purchasing management and planning matches worldwide suppliers and global needs. Also, a more global vision may be achieved through regional or corporate purchasing units, which would yield additional savings from economies of scale and increased negotiating leverage resulting from larger volumes. In turn, when local supply conditions are competitive enough to warrant domestic purchasing strategies, companies choose to award greater autonomy to local buyers, exploiting the significant advantages of proximity, knowledge and adjustment to local environment and supply.

However, certain limitations could derive from unforeseen situations in which, although relevant conditions do determine supply source (foreign or domestic), they fail to define purchasing location. Such would be the case of materials provided by external suppliers due to local supply shortage or unreliability but rather irrelevant in total purchases, or specific to some affiliates, or having local representatives or, even, requiring critical local adjustments.
In these scenarios, centralised management would not yield the typical benefits resulting from resource management synergies or economies of scales. Similarly, materials provided by domestic suppliers due to adequate local supply conditions and having a significant impact on purchase volume or on final product quality could also be subject to centralised purchasing to reduce quality risks or price negotiation inefficiencies or to enhance the alignment with companies’ global objectives.

2.2 Other Components in Global Supply Strategy

Besides the two dimensions of a global supply strategy discussed above, many authors underline other key decisions to be taken when managing purchases at a global level. Baldiwala (2001) emphasises the importance of follow-up and control mechanisms to measure supply management performance variables, not only in terms of buyer-supplier relationships, but also as regards headquarters-subsidiary monitoring.

In addition, Motwani, et al. (1998) recognise Buyer-Supplier Relationships and Subsidiary Management Follow-up an Monitoring process to support global supply strategy alignment and control.

Similarly, Ritchie and Brindley (2002) regard the development of Strategic Relationships at Headquarters – Subsidiaries and Buyer – Suppliers level as key to the support of global sourcing strategies.

Several authors agree that MNCs have chosen GSS to secure global competitive advantages. To that end, they focus on relationships with suppliers, which offer them a chance to increase their efficiency and their competitive advantages (Morgan and Hunt, 1994; Zaheer et al., 1998, Ford et al. 1998; and Peck et al. 1999).

Buyer-Supplier relationships are an important part of a GSS since they can be either a driver or a consequence of sourcing and purchasing strategies at a global level. From the one hand Multinational Companies may need to develop closer buyer-supplier relationships in order to
respond to increasingly complex market pressures for higher quality products and lesser costs. Clearly, it is harder for MNCs to build effective relationships with foreign suppliers than with domestic providers. Several factors add up to this increased difficulty, including distance, language and cultural differences, as well as business and regulatory dissimilarities. As a result, international sourcing entails a greater potential for conflict (Graham; 1985). Thus, MNCs have based their strategically close buyer-supplier relationships on the active role of subsidiaries’ local buyers, exploiting their knowledge of and proximity to local suppliers or international providers’ local agents.

Authors describe two key and opposing types of buyer-supplier relationships (Dyer, et al., 1998 and Saunders, 1994): *arm’s length relationships* (adversarial model) are based on competitive and short-term transactions featuring formal communications, while *partnership relationships* (cooperative model) build collaborations that hinge on mutual trust and long-lasting interactions. Accordingly, supplier development becomes a crucial strategy to enhance supply performance, promoting suppliers’ involvement, objective-oriented alignment and frequent communication to ensure adequate fulfilment.

In this scheme, subsidiaries play an “insider’s” role, building and strengthening close relationships with local suppliers (Forsgren, 2002). These locally-engineered and culture-related relationships foster greater subsidiary autonomy (Solvell and Zander, 1995).

On the other hand, decisions to purchase products or services locally may require the development of suppliers with adequate capabilities to meet product and quality requirements. Supplier development requires closer and long term buyer-supplier relationships and partnership agreements.

Headquarters-Subsidiaries relationships in global supply strategy refer to the level and type of coordination and control mechanisms used when decisions and activities are divided between the local and the global level.
As reported by literature, MNCs turn to suitable control and follow-up systems to optimise global supply management performance. Also, they need to build an appropriate global procedure framework to ensure worldwide operations’ reliability and regularity (Baldiwala, 2001; Ritchie and Brindley, 2002; McAdam, and McCormack, 2001; and Prasad and Sounderpandian, 2003). Thus, these companies need performance measurement systems that enable them to monitor subsidiary supply chain management through specific objectives and reporting processes in order to detect deviations and to implement corrective actions. These processes are also used by subsidiaries to assess local suppliers’ management and service (Baldiwala, 2001; and McCormack, 2001). Corporate management procedures and policies may also be set in place to ensure global supply consistence and alignment.

Indeed, it is possible to highlight two clearly-defined types of control systems (Baliga and Jaeger, 1984; Snell; 1992): bureaucratic control, encompassing greater control procedures and mechanisms and featuring constant operative monitoring through explicit corporate policies, and cultural control (action planning), based on a more personalised follow-up process hinging on close interaction among corporate and subsidiary executives and requiring greater subsidiary commitment to and understanding of corporate goals, values and practices. These control systems have been found to be associated with three management or governance dimensions (Snell; 1992): centralisation, as regards the use of authority for decision-making; formalisation, referring to formal management procedures, and normative involvement, as related to the use of non-explicit standards shared by both parties.

The literature shows that, although there is no predominant influence pattern favouring either control system, a series of key factors (contingency factors) seems to prompt specific choices. The most relevant contingency factors include MNC’s stage in their internationalisation evolution process, subsidiary strategic significance (as regards autonomy and local or regional responsibility scope), interdependence among subsidiaries, environmental uncertainties, and headquarters-subsidiary cultural proximity.
Clearly the type of control predominant in MNC strategy will influence directly the mechanisms used to coordinate and control purchasing activities between subsidiaries and centralised purchasing units, although some differences may arise as a consequence of specific needs or contingent factors related to global supply strategy.

In conclusion, the literature highlight four different areas on which multinational companies should take decisions to design their global supply strategy. These decision areas appear closely related to each other, and their combination seems to be influenced by some contingent and strategic factors. However, the literature seems to lack a comprehensive model of the overall decision made by companies on the four dimensions mentioned above.

Accordingly, our research work attempts to analyse the development of global supply strategies in multinational companies in order to draw a model of interrelated decision.

3. Research Aims

According to the background discussed above, this paper aims at exploring Global Supply Strategy of Multinational Companies in order to understand the level of interdependence of the different decision areas involved and to highlight alternative Global Supply Strategy models.

This work is part of a broader research project undertaken jointly by IAE Business and Management School (Argentina) and Dipartimento di Ingegneria Gestionale, Politecnico di Milano (Italy) to study the development and implementation of Global Supply Chains in multinational companies pursuing worldwide expansion processes.

Global Supply Strategy will be analysed according to the following dimensions:

- Sourcing strategies, i.e. the strategy chosen for selecting global supplier networks (supply source)
- Purchasing location strategies; i.e. the strategy pursued to distribute key purchasing responsibilities in global organisations (purchasing location)
• Supplier relationships strategies, i.e. the type of follow-up and control strategy used by subsidiaries to monitor their suppliers

• Headquarters-subsidiaries relationships, i.e. the monitoring and control strategies pursued by headquarters to manage purchasing activities of their business units throughout the world.

Accordingly, research questions for this paper are the following:

RQ1. Which key variables are considered by MNCs to model their Global Supply Strategy based on major dimensions: Sourcing, Purchasing, Supplier relationships and Headquarters-subsidiaries relationships? How do these dimensions influence behaviour profiles?

By exploring this question, we will gain a better understanding of the relationships between decisions, also shedding light on the alternative evolution processes pursued by companies to effectively internationalise their purchasing operations.

RQ2. How do MNC globalisation processes relate to global supply strategies based on key dimensions?

This research question addresses the possibility to have alternative supply strategies as a response to the evolution of MNC towards higher levels of globalisation which do not necessarily imply unidirectional globalisation and centralisation of activities and policies.

4. Research Methodology

The research has been performed using a multiple-case study method. The case study method was chosen because it constitutes a research strategy seeking to understand the complex relationships among multiple variables and their dynamics, and because it is the most appropriate means to address how and why questions regarding a set of facts (Eisenhardt, 1989; Yin, 1992). According to the authors, qualitative research approaches through multiple-case studies have traditionally been favoured when the main research objective is to improve
our understanding of a phenomenon, especially when this phenomenon is complex and deeply embedded in its context.

The research methodology may be divided into two main stages: an initial phase that involved the analysis of current literature, and a second stage that concentrated on the empirical application of the theoretical framework to the research sample.

The theoretical analysis contributed mainly to better identifying existing Global Sourcing Strategies and buyer-supplier relationship types and their key driving factors to provide the necessary ground for the research framework definition.

Once preliminary analyses had been developed, we could formulate the research framework that was used to analyse empirical data.

Empirical evidence was drawn from a sample of Italian Multinational companies operating in the MERCOSUR area, varying in size and industry. Following Eisenhardt (1989), who recommends a sample size of four to ten organizations, we limited this study sample to seven companies. The geographic location considered for this research matched a single country of origin criterion, which determines the existence of similar cultural patterns, and a single region chosen by companies for their expansion, in order to allow for a comparative analysis of different cases in the same environmental and market conditions.

The MERCOSUR area was selected because it embodies the largest Latin American economy (65%) and the fourth largest economic region in the world, totalling a GDP of US$ 1.9 billion in 2006 and registering sustained growth since 1990 (reaching an economic growth rate of 3.2% in 2005, a rate higher than the European Union's 2.3%). MERCOSUR has become the second Foreign Direct Investment (FDI) recipient among emerging markets, with a total foreign investment of US$ 60 billion between 1970 and 2005, thus representing a notable example of renewed worldwide interest in regional trade agreements (Eichengreen, 2004). In this context, Italian investments account for a high FDI share, which also responds to a strong
cultural influence in the region due to significant immigration flows dating back to the 1940's and 1990's.

The companies selected for the research sample are manufacturing companies, with upstream supply chain development and global operations, to enable an adequate analysis for the research purposes. Cases where selected in order to maximise the differences in terms of size, type of ownership, strategies, and evolution in the globalisation process, in order to allow theoretical replication while analysing empirical data (Yin, 1992). Specific data were collected through personal, in-depth interviews with members of the top management team in each firm, including key company officials in charge of international supply management areas, as well as subsidiaries’ general managers and supply and purchasing area managers, in order to obtain a general and reliable vision of both corporate global supply strategy management and subsidiaries’ development and implementation processes.

These interviews were carried out by the researchers using a semi-structured questionnaire, at both multinational company headquarters and subsidiaries, ensuring interviewers’ control, instant feedback and clarification of specific issues, over a period spanning from early 2002 to mid 2004.

The checklist was sent in advance to respondents to allow them to focus and reflect on the research subject. The questionnaire consisted of key open-ended questions, to be supplemented with additional ones during the interview. Interviews lasted between 90 minutes and two hours, and occasionally took as long as four hours. Some new topics were added during the data collection process, and some new interviews were carried out in order to get more specific data about issues that had emerged during the analytical work.

The questions concentrated on facts and events, rather than on respondents' interpretations, through the use of courtroom procedure. Relevant research questions focused on: global sourcing strategy and policy development at corporate level, key driving factors of global sourcing and purchasing strategies, different profile of buyer-supplier relationship strategies
and evolution, coordination mechanisms to support supplier monitoring and controlling (global and local) performance, and supplier development strategies.

Interviews were transcribed just after meeting with respondents and data analysed as soon as possible, while information was still fresh in the mind of the researchers.

Collected data was analysed by qualitative methods, using cross-case comparisons and explanation building techniques to analyse data. On the basis of Eisenhardt’s work (1989), a unique methodology was developed to structure this type of analysis. The organisations were then paired within their group and iteratively compared to each other in order to identify similarities and differences among them. These comparisons were used to identify characteristics or practices shared by all or some firms to determine the specific behaviour of their strategic activities. Because there was a circular relationship between the theoretical and the empirical analysis, the results of the analysis provided further information for framework refinement.

5. Research Sample

The following section describes major specific developments in each case (see Chart 1):

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
<th>World Operation</th>
<th>Employees</th>
<th>Annual Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Case 1</td>
<td>Supermarket Equipment</td>
<td>15 Manufac. Plants in 12 C.</td>
<td>-----</td>
<td>€ 350 M</td>
</tr>
<tr>
<td>2 Case 2</td>
<td>Food Industry</td>
<td>15 Manufac. Plants in 37 C.</td>
<td>16,000</td>
<td>€ 4.600 M</td>
</tr>
<tr>
<td>3 Case 3</td>
<td>Decorated Plywood Panels</td>
<td>5 Manufac. Plants</td>
<td>1,300</td>
<td>US$ 900 M</td>
</tr>
<tr>
<td>4 Case 4</td>
<td>Wires Industry</td>
<td>50 Manufac. Plants in 20 C.</td>
<td>12,500</td>
<td>€ 3.100 M</td>
</tr>
<tr>
<td>5 Case 5</td>
<td>Tires Industry</td>
<td>22 Manufac. Plants in 10 C.</td>
<td>20,000</td>
<td>€ 2.800 M</td>
</tr>
<tr>
<td>6 Case 6</td>
<td>Car Industry</td>
<td>60 Countries</td>
<td>44,500</td>
<td>US$ 50,000 M</td>
</tr>
<tr>
<td>7 Case 7</td>
<td>Industrial Procurement Solution</td>
<td>45 Countries</td>
<td>42,500</td>
<td>US$ 6,000 M</td>
</tr>
</tbody>
</table>

Chart 1 – Case Studies

Case 1

This family-owned business company operated in 90 countries, with a total of 15 production plants. Its constant expansion turned it into a medium-size conglomerate pursuing
internationalisation as its global strategy. The company manufactured and marketed supermarket refrigerating equipment and accessories, adjusting to local markets’ requirements with standard products and customized equipment.

The Group’s international expansion plan provided a rather decentralised framework, although certain corporate controls were applied according to the nature, term and risk of some decisions.

Case 2

The company was an Italian family-owned business managed, since its origins, by its owners. It manufactured and marketed chocolate products and candies, leading the Italian market and holding a second position in the overall European market. The Group had 28 operating units, 31 marketing locations and 15 manufacturing plants.

A privately-owned company, it counted on a highly professional management team that is fully involved in international decisions.

Case 3

This Italian family-owned company ranked among top European manufacturers in the wood panel and furniture industries. It also manufactured other by-products for the furniture production and decoration industries, such as plywood boards, resins and wallpaper. It had five manufacturing plants in Italy for panels and furniture, a plant in the MERCOSUR area for panels, and, a plant in Belgium exclusively for resins. Commercially, it operated in Europe and Asia, as well as the Americas.

Its expansion strategy was based on the search for international marketplaces offering top natural resources and potential consumer segments. Subsidiaries’ technical and professional consultations with Italy constituted an ongoing activity in the company.

Case 4

This MNC focused on the production and marketing of cable, accessories and systems for electricity generation, transportation and distribution and held leading market positions
throughout the world. As a multinational corporation, it diversified its activities in other businesses, such as tire manufacture and marketing, large-scale real estate developments and an interest in telecommunications. It had 11 productive units in 13 countries, which totalled 2,500 employees worldwide.

The company’s sustained international growth was supported by explicit operation policies, as well as fluent headquarters-subsidiaries communications. Centralized decisions were based on several criteria, depending on their nature and relevance.

**Case 5**

This MNC manufactured and marketed tires for all kinds of vehicles, ranking sixth among top world producers in its industry. The organization originated in Italy as a family business managed by its founder. It had 22 productive units in over 10 countries, employing more than 20,000 people worldwide.

The company chose productive specialisation to pursue its global manufacturing strategy. Although its policy focused on global products, some products were regionally designed to adjust to the specific requirements of individual, highly profitable markets.

The company offered several technological solutions for each market segment. Although the basic technology for tire manufacture and design was managed by headquarters, the company tended to grant leeway to its local subsidiaries for universal operative processes involving raw materials that did not compromise final product safety.

**Case 6**

This automotive MNC operated through wholly-owned production plants –located in Italy, Poland, and MERCOSUR- and joint venture or licence agreements for other plants –located in Europe and Asia. It employed over 44,600 people worldwide.

The Group’s growth strategy intended to develop competitiveness through regional specialisation, in order to satisfy global demand either through production plants, licensing agreements or joint ventures. Thus, the company assessed not only local political and
economic conditions, but also cultural variables affecting supply strategy and individual partnerships. It tried to reduce costs by standardising processes through the production of a single final product for the whole world. As a result, the Group was driven towards a productive specialisation system, in which each factory catered exclusively to its regional needs. Under this generic strategy, the definition of the types of vehicles to be manufactured by each plant responded to individual market demands and needs and to cultural and geographic variables.

Case 7

This MNC specialised in industrial plant infrastructure and architectural design, engineering and construction. It also operated in the steel and petrochemical industry. The Company included more than 100 companies and operated in over 45 countries throughout the world, with a full-time headcount of over 42,400 employees. Its expertise focused on five business areas: steel industry, infrastructure projects, industrial process and plant exploitation, power industry and utilities.

Its supply strategy was strongly centralised: 100% of its supply needs were procured through an independent business unit, except for some categories of goods or services whose purchase was traditionally outside the responsibility of the purchasing function.

6. Research Development and Findings

The following section presents the global supply strategies of the companies in the research sample:

Case 1

The company’s strategy tended towards local supply to seize pricing advantages and to exploit local availability, unless quality or competitive issues arose. Thus, certain critical products were procured centrally on account of quality or availability concerns. The criteria used to determine supply source were the following: a) offer availability; b) price or freight
costs; and c) specificity or labour-intensity. As regards purchase location policies, the company afforded affiliates remarkable autonomy, although, in some cases, prices and terms were negotiated from headquarters. The criteria used to determine purchase location included: a) leverage (price and terms); b) supply source (usually central if supply was global, and vice versa); and c) material relevance.

By and large, the company maintained close, supportive relationships with suppliers – usually SMEs. Supplier follow-up focused on corrective control for product quality. In terms of headquarters-subordinates relationships the company does not have explicit policies. The company provides a highly decentralised framework, resorting to centralised guidelines and controls for long-term decisions and support, but relying on personalised and informal control for operative issues. A key coordination mechanism is the presence of Italian controllers in local subsidiaries.

Case 2

Supply sourcing tended to be local, except for commodities unavailable in the domestic market or for global purchases involving large volumes that could fetch better prices through central negotiations. Summing up, the company’s criteria to determine supply included: a) availability; b) price and logistic costs (usually associated with purchase size for centrally negotiated global supplies). Accordingly, company policy promoted subsidiaries’ autonomy, except when global supplies afforded better price conditions through central negotiations. The criteria used to determine purchase location were: a) better price conditions due to scale economies in negotiations; and b) quality requirements for critical materials or components. Relationships with suppliers on operational issues are mostly based on product control and service quality, including supplier evaluation and certification. For smaller suppliers the company adopted collaborative relationships aiming at supplier development. Although the company had no explicit policies in this regard, company culture provided global guidelines for subsidiaries monitoring. Strategic decisions are made by headquarters; headquarters’
control is personalised and non-bureaucratic, focusing on economic and financial results in operations management (quality).

Case 3

The company’s corporate supply policy was local, depending on domestic availability and convenience, while critical products were supplied externally. As regards purchasing strategy, although subsidiaries were granted ample leeway, headquarters monitored purchasing management operations. Usually, subsidiaries informed headquarters about prices quoted by suppliers for evaluation and possible global, more accessible alternatives. For regular raw materials, purchases were centralised to exploit economies of scale. Nonetheless, product selection, production and launching schedules were decided at country level.

Relationships with suppliers are mainly competitive, price-oriented and focused on product quality and timely deliveries. The company relies on centralized policies for key strategic decisions. Purchasing management is characterised by local autonomy but constant corporate surveillance. Control systems were personalised and lowly bureaucratic, focusing on economic, financial and management results (product quality, customer satisfaction, market share, growth, exports share, etc.).

Case 4

The corporate policy was based on local supply, except in cases of supply shortage and inconvenient prices that forced the company to resort to regional supply. The criteria used to determine supply source included: a) offer availability; and b) overall cost convenience (price and logistic costs). The company’s global purchasing strategy focused on local autonomy, although, in many cases, a regional approach was implemented through regional lead buyers.

In turn, the company granted subsidiaries great freedom for local purchases, under central control for purchasing procedures, global suppliers’ certification and price benchmarking. The criteria used to determine purchase location were: a) supply source (usually central if supply was global, and vice versa), and b) economically relevant materials.
The company maintains competitive relationships focusing on result controls to ensure product quality and competitive pricing (through frequent negotiations) on account of supply type (commodities) and supplier characteristics (mostly developed or multinational companies).

There are explicit policies for subsidiaries management involving written procedures for H.R. management (incentive systems), product and process technology, financial strategy and purchasing management. The company used bureaucratic control systems consisting of reports on economic and financial results, productivity indicators and other sector-specific operating standards (centrally defined), through the company’s on-line central information system linked to subsidiary management evaluation and incentive systems.

*Case 5*

The company based its corporate supply source policy on multinational companies, since materials were standard and highly relevant to final product quality. However, in some cases, the company resorted to regional or local suppliers. It offered subsidiaries ample autonomy for local negotiations, except in the case of specific products purchased by headquarters, which then applied transference prices. The criteria used to determine supply source included: a) offer availability; and b) local cost convenience. As regards purchase strategy, the company granted autonomy to affiliates, enabling supply decisions to focus on the most competitive alternatives for subsidiaries. The criteria used to determine purchase location were: a) supply source (global supplies entailing scale economies or leverage were handled centrally); and b) economically relevant materials.

In general terms, relationships with suppliers are competitive, focusing exclusively on quality and price standard compliance. Also In the case of local SMEs providing commodities price negotiations is competitive.

The headquarters have explicit policies for financial strategy, IT systems, product design (though localised), process technology and H.R. strategy (management evaluation and
incentive systems). Control systems are highly bureaucratic for economic, financial, production and productivity results, through online reporting via the company’s centralised information system.

Case 6

Corporate policies regarding supply source definition were combined, tending towards greater global-regional supply due to the existence of proprietary production units. As a result, the company was forced to develop global standardisation in order to assure greater exchangeability and efficiency through adequate coordination provided by the Central Purchasing Office, responsible for monitoring and coordinating part exchanges among affiliates by recommending the most convenient sources and destinations. In general, relevant criteria followed to determine supply source included: a) offer availability; and b) price and logistic costs. As a result, purchases were subject to strict central control, executed by the Central Purchasing Office, responsible for global purchasing information management. Relationships with suppliers vary depending on supply relevance. For unimportant, standard parts and components, the company maintains operative relationships focusing on corrective controls on product quality, service and quality results, internal management and open-cost price negotiations. For top or critical supplies, it chooses a collaborative approach in addition to the aforementioned controls, basing the relationship on joint work to solve problems and co-design products. Some SMEs outsourcing services required company support for internal management development and adjustments involving technical advice on procedures and management processes. The company relied on explicit, corporately defined policies for product design, process technology, financial strategy, purchase management and H.R. management (training and coaching). It resorted to highly bureaucratic controls focusing on economic and financial and operational results, through daily and monthly reports submitted via central information network.
Case 7

The company pursued a strongly centralised purchasing strategy through an independent business unit, that enabled it to achieve purchase efficiency, to secure supply availability and to ensure require quality levels. The first criterion used to determine supply source focused on materials’ demand and supply structure. A product was considered global when all plants required it, and it was provided internationally. In the case of global supplies, the company pursued a global supply strategy, trying to select suppliers that were able to supply worldwide plants. Thus, strategic materials and general operation materials were purchased through the Central Office, whereas irrelevant (not critical and reduced in volume) materials were procured locally, if available.

Most relationships with suppliers are operative, focusing on product quality (rejections) and service (timely deliveries) results by means of a systematic follow-up procedure to monitor supply performance through quantifiable measurements and target standards. The company also launched a Suppliers’ Global Development Program essentially to develop a network of strategic, efficient and consolidated suppliers with exporting potential in order to adjust to the needs of Group’s clients. In this case, the support provided by the company included careful selection, management counsel and training, internal process certifications and access to global markets through Group’s clients.

Corporate policies are explicitly defined in procedure manuals that guarantee management consistence and effectiveness. In particular, there are clearly defined procedures for each key purchase management phase. Company control systems tended to be bureaucratic, including frequent reports including operative and management indicators, monitored through the company’s central information system, linked to subsidiary management evaluation and incentive systems.
7. Discussion

RQ1. GSS Major Drivers and Relevant Impacts

The analysis of the case studies highlight first of all that sourcing decisions and purchasing location are two, highly interrelated decision areas when shaping Global Supply Strategies. These decisions are made in many cases using explicit criteria of feasibility, economic convenience and purchasing effectiveness.

The key variables bearing a relevant influence on supply sourcing strategies are associated with Purchasing Characteristics and can be summarised as follows:

- *Local and global supply availability*
- *Economic convenience*, considering prices, taxes, and logistic costs.
- *Specialisation level*, as regards adjustments to suit subsidiaries’ needs and requirements.

In turn, the common variables that determined purchasing location strategies have been found to be the following:

- *Product relevance*, as regards its impact on final product quality and/or purchase value.
- *Negotiation leverage*, both to secure economic benefits drawn from economies of scale and to seek global agreements, having an impact on prices and general purchase conditions.

Thus, this apparent connection between global purchasing strategy definition processes for both dimensions is limited by the existence of several factors that differ in both decisions. Depending on their significance, these factors could actually determine ultimate strategy choices for both supply sourcing and purchasing location, shaping a mix of potential alternatives for global supply strategies, which are summarised in Chart 2:
<table>
<thead>
<tr>
<th>Supply Source</th>
<th>Central</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>Both standard and relevant materials (due to high operative significance or purchase relative value) with purchasing scale economies and with no critical logistic costs or high delivery lead times.</td>
<td>Relatively less important materials, with global economic convenience and low service significance, or with local representative of global supplier</td>
</tr>
<tr>
<td>Local</td>
<td>Relevant materials with negotiation power incidence and better local economic conditions, long delivery lead times, and/or customised or service-intensive materials.</td>
<td>Relatively less relevant materials, featuring local economic convenience, or plant-specific materials, or those with high logistic costs or service significance (delivery time).</td>
</tr>
</tbody>
</table>

Chart 2 – Global Sourcing and Purchasing Strategy Definition

In turn, although explicit criteria have been found to affect the definition of these strategies in many cases, our research analysis has also indicated that other implicit variables complementarily influence these strategies. An implicit variable identified as having a strong influence is the role and relevance of individual subsidiaries within each MNC organisation, as well as local management expertise and capabilities. More relevant subsidiaries having sounder management are subject to decentralisation-oriented policies. The environmental conditions (critical or beneficial) and company management performance (either globally or at subsidiaries) have also been found to influence both decision dimensions. Usually in critical or low-performance situations, companies tend towards greater centralisation and to stress economic convenience in supply origin definitions.

In addition, the study has shown that MNCs’ global strategies (particularly centralisation and organisational structure) are also a significant factor in the definition of both supply sourcing and purchasing location. Indeed, highly centralised companies (seeking to ensure greater
worldwide alignment and competitiveness) preferred global sourcing and purchasing strategies with highly centralised purchasing management (e.g., Case 7). Thus, the definition of these two global sourcing and purchasing strategy dimensions does not result from a methodical decision-making process based on explicit criteria, but it involves decision practices supported by implicit and explicit criteria. Its implementation dynamics includes constant revisions and readjustments to respond to internal and environmental conditions.

Looking at Global Supply Strategy from the perspective of buyer-supplier and headquarters-subsidiaries relationships, the research allowed to point the different patterns of choice and the key relevant factors in the decision making process.

The analysis reveals that most buyer-supplier relationships in our sample were primarily competitive, focusing on operating, short-term results concerning product corrective control, price negotiations, follow-up of supply quality results through quantified indicators, and periodical internal process audits for small and medium-sized suppliers with irregular management quality.

However, differences in buyer-supplier coordination mechanisms exist depending on supply product and market characteristics. Companies purchasing relevant supplies (in terms of quality standards or purchase economic value) or needing local adjustments tend to prefer buyer-supplier relationships that focus on supplier development efforts, involving explicit supplier development programs, development assistance for suppliers, and penalties for non-compliance. These relationships usually improve on-site work practices and rely on more personalised monitoring mechanisms -particularly, in Cases 6 and 7, with high operative significance, purchase relative value, or plant-specific materials, and in Cases 1 and 2, with customised or service-intensive materials.

Besides, subsidiaries build cooperative buyer-supplier relationships focused on local supplier development for specific needs, depending on the impact of supply management situations
resulting from local shortage at required quality and efficiency levels that they derived from a local initiative or a corporately defined strategy.

In general, collaborative buyer-supplier relationships were primarily based on subsidiary support for supplier development, oriented both to greenfield development to respond to specific needs and development of existing suppliers to drive suppliers’ performance improvement.

In some cases cooperative buyer-supplier relationships stemmed from corporate strategies pursued by companies as part of global supplier development programs intended to build an effective global supplier network that would respond more adequately to worldwide company requirements.

Additionally, our research has revealed a common behavioural pattern in MNC headquarters-subsidiary control and monitoring relationships that leans towards a personalised approach based on shared practices and values, complemented with formal control systems.

Nonetheless, our sample research analysis has revealed that companies with GSS, featuring highly centralised purchase and global sourcing strategies (such as, Case 5, Case 6 and Case 7), usually develop more formal and bureaucratic monitoring and control systems to manage their subsidiaries, allowing for greater consistence in worldwide control standards and criteria and, at the same time, ensuring deeper global supply strategy alignment and coordination. On the other hand, companies with more local sourcing and decentralised purchasing strategies (such as, Case 2 and Case 4, and particularly, Case 1 and Case 3) develop more informal and, therefore, more action-oriented mechanisms to manage their subsidiaries in order to reduce the risks involved in ex-post monitoring procedures and to profit from subsidiaries’ greater natural understanding and alignment (see Chart 3).

In short, the analysis of the case studies of the present research allow to draw a complete picture of the alternative choices companies face in designing their Global Supply Strategies, the key driving factors influencing each of them, and the evolution pattern, which is
significantly associated with supply and purchasing features as well as MNC’s centralisation strategies.

RQ2. Globalisation Process Relationship to GSS

The second research question that should be addressed is whether these choices are highly related to each other or there are alternative Global Supply Strategies which do not depend only on the above mentioned evolutionary process.

To answer this question, we can observe that the level of globalisation of the MNC appears to be a key driver in shaping Global Supply Strategies.

As far as supply sourcing is concerned, companies in earlier globalisation stages (such as Case 1, Case 2 and Case 3) have evolved towards an international supply substitution strategy by developing local suppliers, whereas more fully globalised companies (such as, Case 4, Case 5, Case 6 and Case 7) have gradually focused their supply strategies towards the development of global solutions (see Figure 1).

![Figure 1 – Purchase Economic Value Mapping in Sample Global Sourcing and Purchasing Strategies](image-url)
Concerning purchasing management, more globalised MNCs have been found to handle their global requirements through centralised purchasing management, accomplishing greater efficiency and competitiveness through global sourcing strategies. On the other hand, less globalised MNCs exhibit essentially local needs preferably satisfied through local purchasing management, achieving more effective and agile relationships with suppliers. Instead, for operational purchasing management location, companies prefer an approach that highlights local autonomy, although headquarters provide their support through central pricing negotiations or benchmark information, the exception being Case 7, which pursues a highly centralised corporate strategy.

Similarly, also buyer-supplier and headquarters-subsidiaries relationships are influenced by the evolution of the MNC globalisation process.

In addition, this research analysis indicates that MNC globalisation process evolution bears a relevant effect on buyer-supplier strategies chosen by companies. In fact, our research sample revealed that companies in earlier globalisation stages (such as the Case 1, Case 2 and Case 3) usually built closer, more personalised relationships with their suppliers, whereas more fully globalised companies (particularly, Case 4, Case 5, Case 6 and Case 7) established more formal relationships, with more quantified controls. In turn, companies in earlier globalisation stages, tended to secure local supply solutions, pursued local supplier development and conversion strategies, whereas more fully globalised companies (particularly Case 6 and Case 7) formulated global development strategies for their current suppliers in order to ensure greater adjustability and commitment to company needs on a worldwide basis.

All the same, global companies tend to have subsidiary control systems based on formal mechanisms and procedures and focused on annual budgetary control (with projections and management objectives), explicit procedures, systematic reports (economic, financial and management results), and on-line information systems for central control. In turn, locally
oriented companies resort to more personalised control systems, focusing on work practice monitoring and the application of management standards.

In particular, companies in earlier globalisation stages have flatter and more flexible organisations. This is particularly true in situations where there is significant cultural closeness between headquarters and subsidiaries. In turn, companies in advanced globalisation stages tend to adopt complementary, formal and bureaucratic control systems, with explicit procedures and policies (see Chart 3).

<table>
<thead>
<tr>
<th>GS Headquarters-Subsidiary Control Strategy</th>
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<tbody>
<tr>
<td>Globalisation Process Evolution</td>
</tr>
<tr>
<td>Less Globally Developed</td>
</tr>
<tr>
<td>Case 1 Personalised Control Systems based</td>
</tr>
<tr>
<td>on Shared Practices and Values, essentially</td>
</tr>
<tr>
<td>via: Periodical Managers’ Meetings and</td>
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<tr>
<td>Contacts, Annual Budget and Informal</td>
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<tr>
<td>Management Reports</td>
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<tr>
<td>Case 2</td>
</tr>
<tr>
<td>Case 3</td>
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<tr>
<td>Case 4</td>
</tr>
<tr>
<td>More Globally Developed</td>
</tr>
<tr>
<td>Case 5</td>
</tr>
<tr>
<td>Case 6</td>
</tr>
<tr>
<td>Case 7</td>
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<tr>
<td>Case 4 Personalised Control Systems,</td>
</tr>
<tr>
<td>complemented with: Explicit Policies and</td>
</tr>
<tr>
<td>Procedures, Formal and Bureaucratic</td>
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<tr>
<td>Control and Follow up, and</td>
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<tr>
<td>Systematic Monitoring via Central</td>
</tr>
<tr>
<td>Information System</td>
</tr>
<tr>
<td>Case 5</td>
</tr>
<tr>
<td>Case 6</td>
</tr>
<tr>
<td>Case 7</td>
</tr>
</tbody>
</table>

Chart 3 – Summary of Globalisation Process Evolution Influence on GS Headquarters-Subsidiary Control Systems

However, also on these dimensions there are solutions which are not explained by the only globalisation process but rather respond to other driving factors, among which cultural proximity, or supply sourcing or purchasing management location strategies.

Overall, we can conclude that although Global Supply Strategy definition process (in term of: Global Sourcing and Purchasing Location, Buyer-Supplier Relationships and Headquarters – Subsidiaries Relationships) is strongly influenced by the stage in the globalisation process in which the company is operating, the final decision may involve a mix of alternatives, according to the nature of the impact of explicit criteria (e.g., supply and purchasing traits) as well as other implicit variables (including MNC’s centralisation strategies).
Moreover, within this decision process, supply Sourcing and Purchasing Location Strategies constitute the core Global Supply Strategy foundation, shaping all global supply organisation and integration activities, and, as such, responsible for the quality and efficiency results obtained from worldwide GS management. These strategies influence the other two key GS dimensions that involve GS key players –headquarters-subsidiary and buyer-supplier relationships- and allow for long-term GSM result sustainability by building a mutual commitment to supply quality.

8. Conclusions

The results from this research allow drawing a model of the interrelated decisions companies are facing when defining their Global Supply Strategy. First, our research study suggests that GSS definition processes respond to explicit variables (including supply and purchasing features), implicit and complementary factors (including companies’ centralisation strategies), as well as MNC’s globalisation evolution. Indeed, it appears that Global Sourcing and Purchasing Location strategies are key variables in GSS definition, as they are seen as main drivers of performance level, as regards both costs and the supply service quality provided by companies’ global supplier networks. Throughout the study, the great significance of Global Sourcing and Purchasing Location strategies as relevant influencing factors is clearly demonstrated, both as regards buyer-supplier and headquarters-subsidiary relationships.

Additionally, our research also shows that, although both dimensions are interrelated, relevant decision criteria differ and there is a mix of potential purchasing global strategy alternatives that respond to a specific behavioural pattern associated with these criteria. In the case of strategic or business-related supplies, companies tend to pursue a global supply strategy, whereas local supplies are preferred for all other materials, as long as external vendors do not
offer substantial advantages. Also, companies are likely to rely on local definition, regardless of supply source, as long as no relevant grounds were found for headquarters’ involvement. Moreover, our data analysis indicates the significant influence of companies’ evolution in their globalization processes on their GSS. However, although global supply strategy definition at MNCs is part of their evolution towards globalisation, it requires a specific analysis for each type of product and market, calling for dynamic and selective revision to ensure the best global supply chain management performance.

It should be noted, however, that this research suffers from certain limitations that should be addressed explicitly. First, this research does not quantify the impact of performance benefits in global sourcing management as compared to other strategies (for instance, a more aligned approach for supply globalisation and purchasing centralisation). Secondly, although the sample featured a wide range of industries and company sizes, the conclusions hereby presented are subject to the restrictions inherent to the nature of this sample, notably including the fact that it was reduced and confined to a single MNC cultural profile (Italian companies), while the study focused on their strategy in a geographical area having similar cultural characteristics. Consequently, in order to expand and deepen these conclusions, further research will be necessary to validate these findings in a more complete sample, through more quantitative methods affording a chance to test variable correlation.
References


