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The Globalisation of Management and Procurement for International Telecommunications Services: The Case of Large French Firms

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Abstract

The International telecommunications market is particularly interesting for two reasons. On the one hand, it was the first market to be "de facto" liberalised and was characterised by strong competition, powerful buyers and therefore important price decreases. On the other hand, it called for innovative behaviour from both suppliers and business customers in order to take into account this new international dimension. Now that both suppliers and large customers have experienced a sufficiently long learning process, it is time to analyse some outcomes of this process. Particularly, it is interesting to analyse the scope of the respective global, regional and national dimensions. From a survey among a sample of the largest French companies, we analyse the main features of the management and purchasing of international telecommunications services, the type of services used and their scope, the main suppliers and the expectations of customers. Finally, we conclude by discussing the diversity of the modes of internationalisation of large companies in relation to telecommunications and IT services.

Keywords: international, global, multinational, telecommunications, procurement, buying behaviour.

1. Introduction

The case of international telecommunications for large multinational companies is particularly interesting for two reasons. First, this market is a good example of early competitive market for telecommunications services, characterised by accelerated competition since the end of the 1980's. In most markets, the loss of market share of the former monopolies was higher in the "international telecommunications for business customers" segment, as typified by the UK market. Second, whereas this interstice between the various national regulations made the development of competition easier, managing integrated international telecommunications services presented a challenge for both suppliers and customers. From the supply side, starting from the traditional bilateral agreements and interconnection of national networks, suppliers had to develop new networks, new services and new relationships between players. From the customers' side, these companies had to learn to manage from an international perspective, what was once done at a national level. The current situation is therefore the result of the intertwining of three learning processes, learning about competition, learning how to supply global services, and learning to manage global services for the customers. The rise of global strategies and players has been extensively documented before (Antonelli 1994; Bohlin and Grandstand 1994; Vialle 1996b; Vialle 1998), as well as the learning processes from a supplier point of view (Vialle 1996a; Epinette, Petit and Vialle 1999). However, it seems that few research articles deal with the way multinational customers manage these services and about the real degree of globalisation.

Let's summarise the various developments leading to the present situation: there was initial dissatisfaction among large multinational customers with regard to international telecommunications (Brousseau 1991; Intug 1989). The multinational development of these companies and the resulting need for increased international co-ordination made the related telecommunications services more important. However, the provision of services was perceived as unsatisfactory for reasons of price, the constraints imposed by heterogeneous national systems, excessive transaction costs and/or failure to meet the requirements of new computer applications (Brousseau 1991; Wendt and Serou 1993). There was therefore an initial trend of internalisation by extending national private networks at the international level or by creating co-operative operators such as SITA or SWIFT. With the improvement of available services on the market, particularly with the growth of virtual private networks and the deployment of high capacity backbones by operators, externalisation became predominant. The emergence of global telecommunications was characterised by an "evolutionary" testing of multiple strategies and types of players. After an initial period of traffic diversion by stand-alone players such as BT or Sprint, the mid 1990's saw the creation of powerful alliances such as Concert, Worldpartners or Global One (Oh 1996; Chan-Olmsted and Jamison 2001). The dissolution of alliances quickly followed their creation, and stand-alone player's strategies became dominant again. This period also saw the creation of Internet backbones by these players or by new entrants like Level 3. The burst of the "Internet bubble" and the resulting financial crisis resulted in market consolidation and rationalisation. The main actors are now Equant, MCI, Cable&Wireless, and Infonet, followed by BT and AT&T who are finishing re-establishing their international presence. However, none of these players benefit from a truly global presence and customers often manage their suppliers on a regional basis. Interestingly enough, the improvements in the provision of commodity services are currently challenging global providers: cheap international calls make some more complex arrangements such as Voice VPNs less attractive, and the widespread presence of ISPs allows virtual private network operators such as Vanco to offer global reach at low cost.

2. Framework and Methodology

2.1 Framework

In this paper, we adapt a previously developed framework (Vialle and Epinette 2001). Our aim is to assess the degree of globalisation of telecommunications networks and services used by French multinational companies, the level of globalisation of telecommunications management, relating them to other items. Therefore we also analyse the level and pattern of globalisation of the firms studied, as well as their expectations with regard to suppliers, and their level of satisfaction from suppliers. We expect these topics to show some form of coherence between them (Table 1).

2.2 Methodology

First we defined the topic and scope of the study with the CIGREF[1] the French association of I&CT managers of large firms. Secondly, we conducted exploratory research to understand and evaluate current and future international telecommunications technologies and services for business customers, looking at the state of the art of actual ICT activity in large companies and analysing suppliers strategies in the different regulatory environments. Thirdly, we conducted an explanatory survey among a few I&CT managers in order to understand their perceptions concerning management of international telecommunications. Finally, we made a quantitative survey in January 2003 with 25 I&CT managers from large French companies,

[1] In total, the annual expenditures of the 105 Cigref members account for almost €11 billion for telecommunications, and almost €22,8 billion for computing.

5 of whom accepted to do an in-depth interview. [2] Due to the small number of our sample, these interviews were particularly valuable for identifying causal aspects that would not have shown up statistically.

Topic	Main concerns	Items
Globalisation of International telecommunications	What are the level of globalisation of international telecommunications networks and services, as well as their management? What is dealt with at the global, regional or national level? What are the trends for the next two years?	Telecommunications - Technologies used - WAN (Voice, Data, PN, VPN) - Intranet, Extranet, Remote Access Management of Telecommunications - Functions - Payment Trend - Degree of centralisation - Outsourcing - Applications - Role of purchasing department
Globalisation of firms	What are the level and pattern of globalisation in the activities and organisation of the firms studied? Is it coherent with the forms of globalisation of telecommunications observed?	Activities - Geographical reach - Location of activities - Pattern of internationalisation Organisation - Centralisation level of main functions - Types of international communications flows
Expectations and Suppliers	What are the expectations of the firms studied? Are customers satisfied with their suppliers? Can these items contribute to understand their patterns of globalisation of telecommunications?	Expectations - Types of telecommunications solutions - Main expectations from suppliers Suppliers (Operators) - Satisfaction level from suppliers - Expected evolution of the number of suppliers

Table 1: Framework

2.3 Sample Characteristics

All the companies are international companies of whom almost 60% belong to Energy and Industry sectors. This has to be taken into account in order to analyse and understand the survey results.

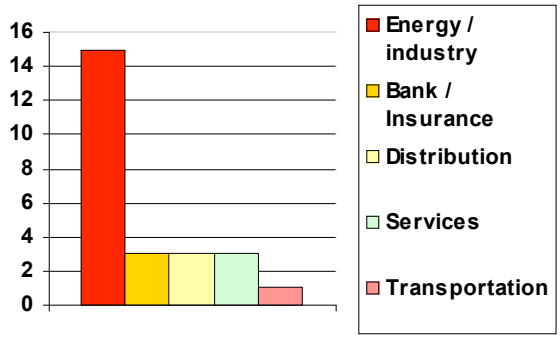

Figure 1: Sample characteristics according to the sector of industry

[2] Respondents were Information System managers or Telecommunications managers at Head Office level.

3. Survey Results

3.1 Globalisation of International Telecommunications

3.1.1 Telecommunications

The diagrams below (figure 2) present both the virtual and non-virtual character of company WANs (Wide Area Networks), according to their type (voice, data) and their geographical location.

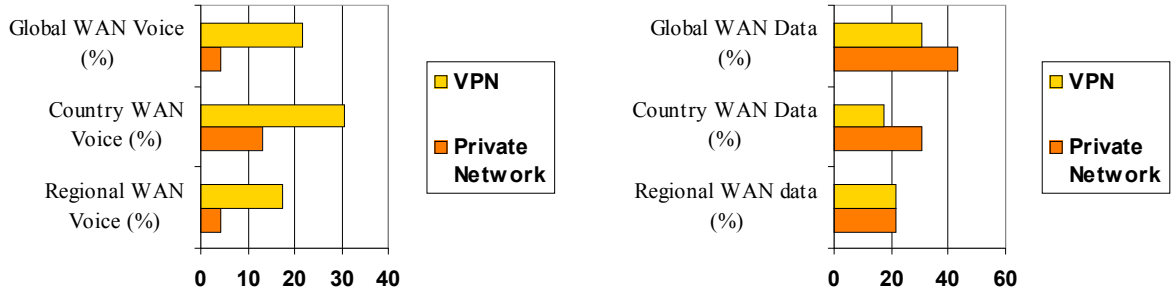

Figure 2: Types of WANs used

Note that voice WANs mostly use Virtual Private Networks (VPN), while Data WANs rely slightly more on Private Networks than VPNs.

Types of access

The three types network access is rather global, including remote access (figure 3). However a large share of Extranet access remains national.

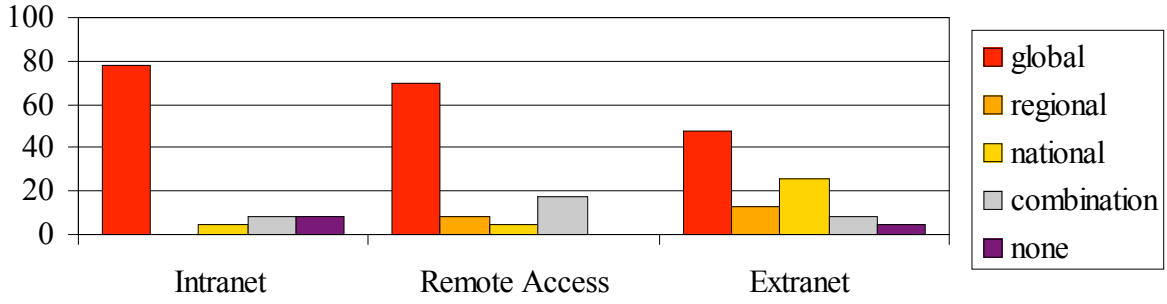

Figure 3: Type of network access used (in %)

3.1.2 Management of telecommunications

The level of globalisation varies significantly across functions (Figure 4). Strategic functions are dealt with more at a global level, while operational functions are usually more decentralised. As for the telecommunications functions in the company, 11 out of 25 have a strategic committee in charge of telecommunications and 2 possess a dedicated telecommunications subsidiary.

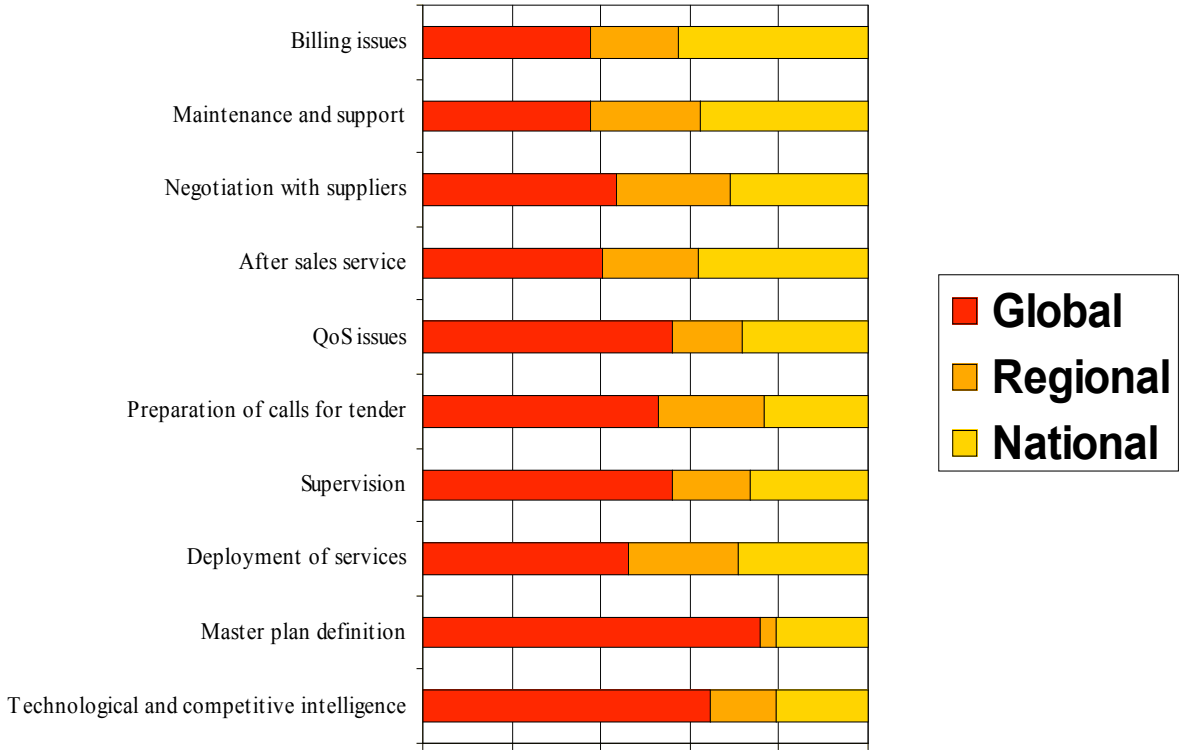

Figure 4: Level of globalisation of functions

Data payment often occurs at a global level; fixed or mobile services are however more likely paid at national levels (Figure 5). This may be explained by the global approach to data networks used by the companies and by the availability of data global networks compared to the more national patterns of customer use domestically.

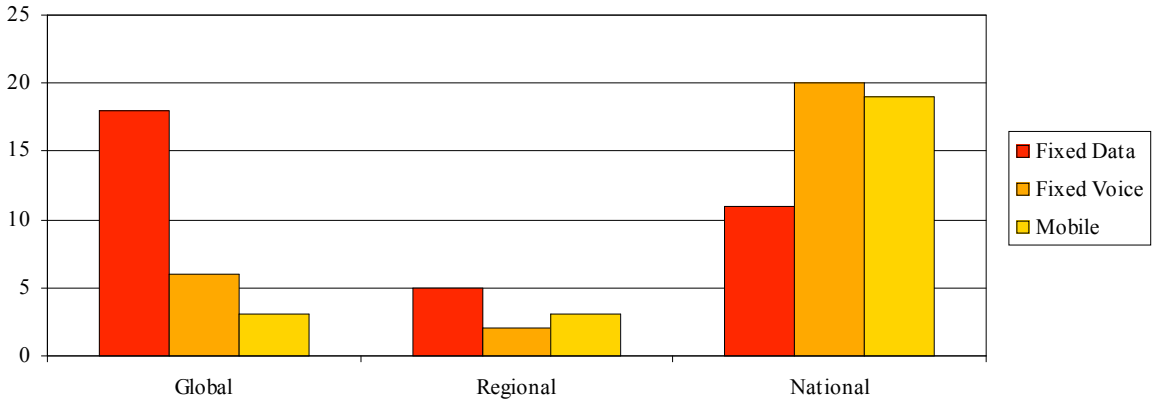

Figure 5: Geographical level of bill payment within the company

3.1.3 The main trends in international telecommunications management

The level of global centralisation of the management of international telecommunications is different for data and voice services (Figure 6). Data are managed at a global level whereas voice is managed at a national or regional level. Overall, there is trend towards centralisation even if there are few operators capable to offer such a service in the mobile market. The number of suppliers has not increased.

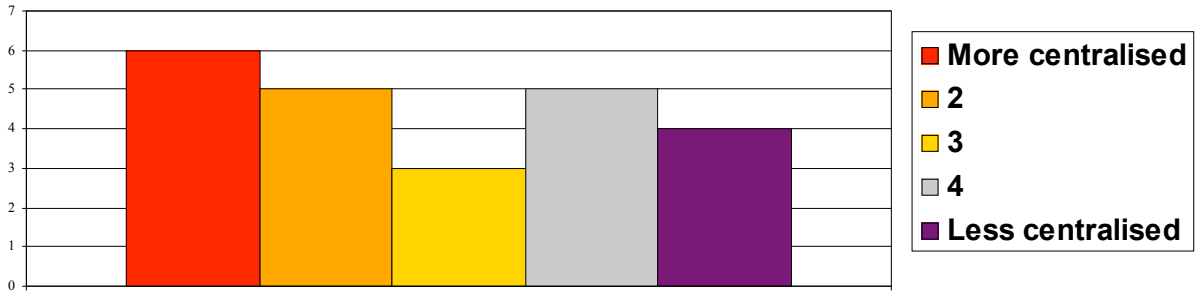

Figure 6: Degree of centralisation of international telecommunications management

We also observe significant differences concerning the expected outsourcing trend. The technical aspects of telecommunications management appear to be outsourced more and more, especially in the domains of maintenance, monitoring and equipment supervision. On the other hand, all strategic activities such as tendering, telecommunications plans or market and technology monitoring are still undertaken within the organisation.

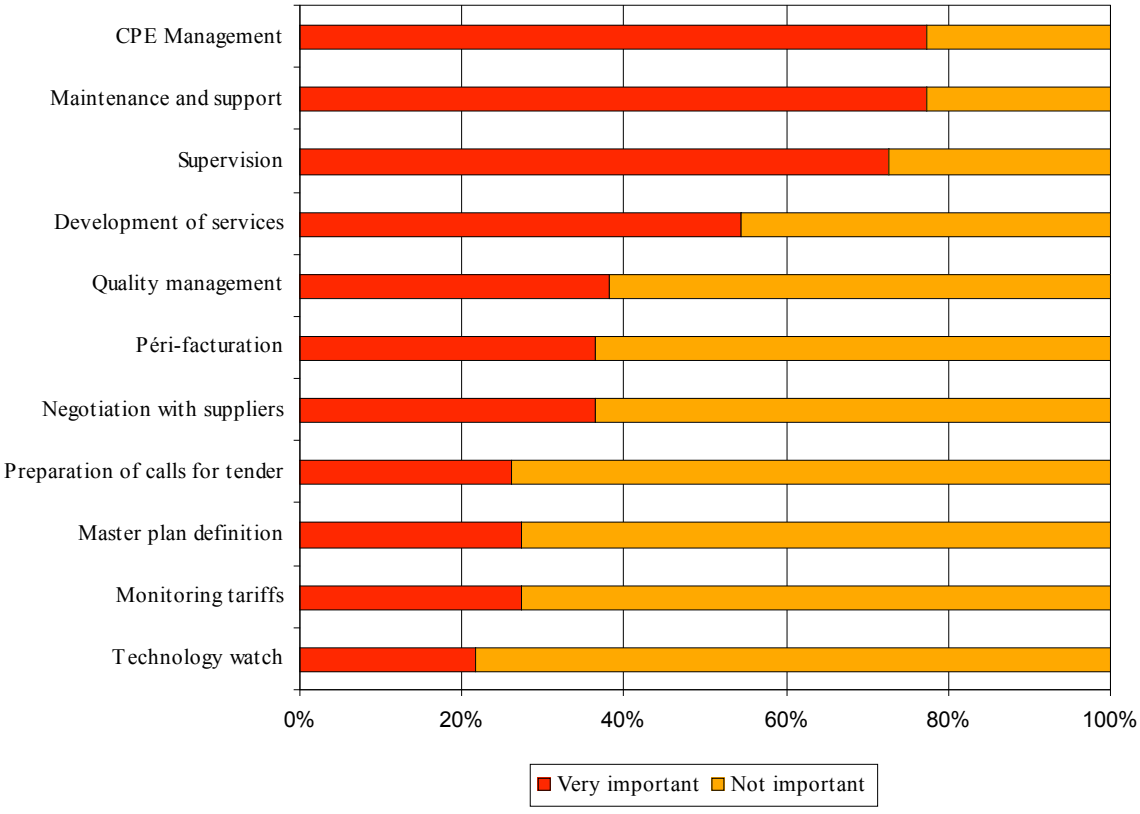

Figure 7: Outsourcing trends for the next two years

As for the demand for telecommunications services, it is clearly influenced by applications (Figure 8). Most business-oriented applications are deployed (mail, SCM, CRM, ERP, etc) and enjoy a growing usage.

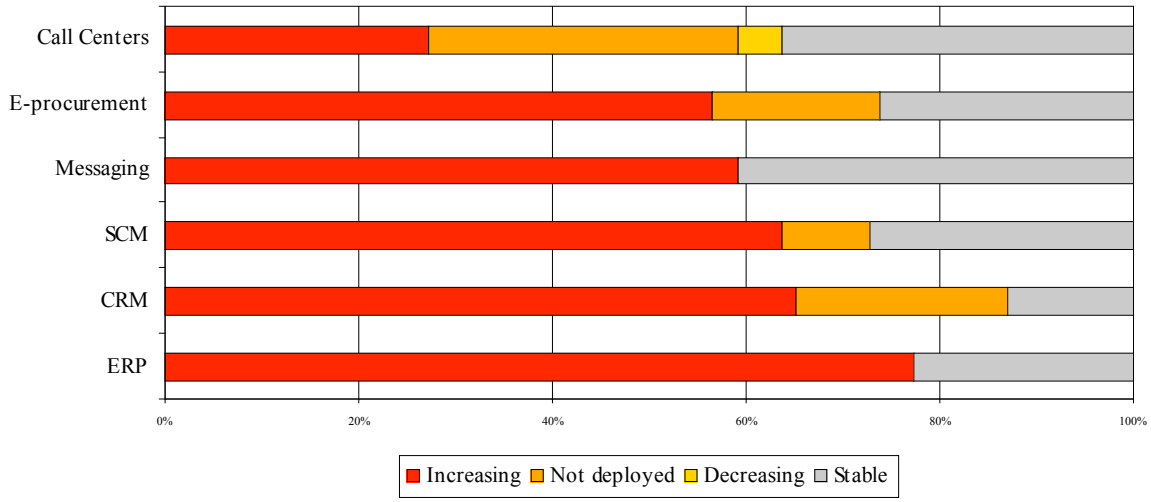

Figure 8: Main applications

With regard to the changing role of the purchasing department, we note that it is going to have growing importance in the future in evaluating and negotiating with suppliers but it will not play a more important role in defining needs or reporting.

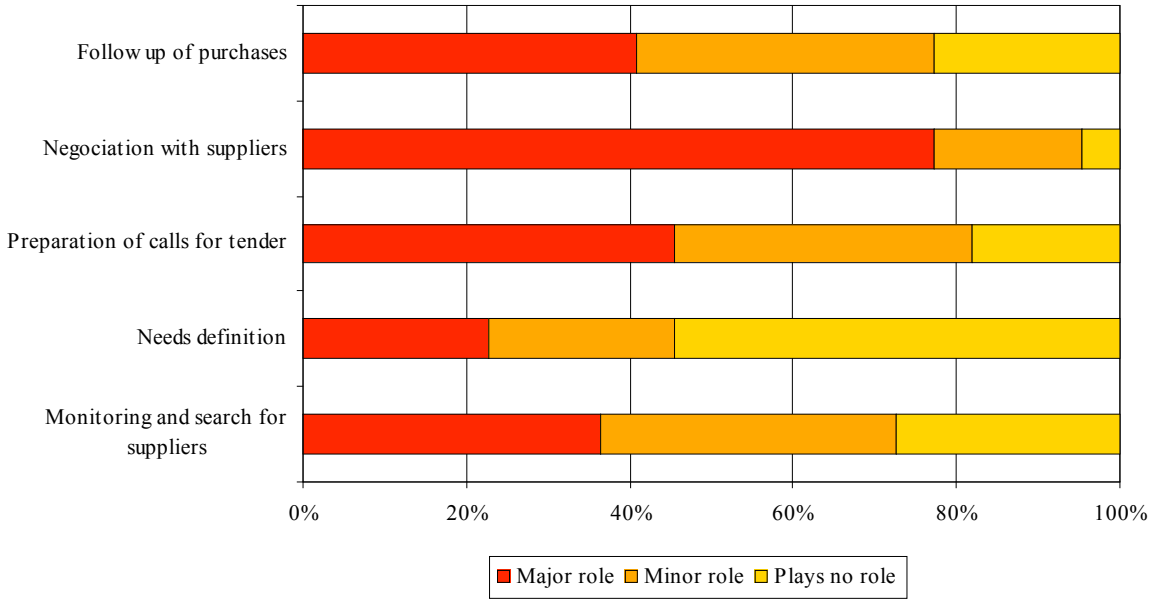

Figure 9: Role of purchasing department

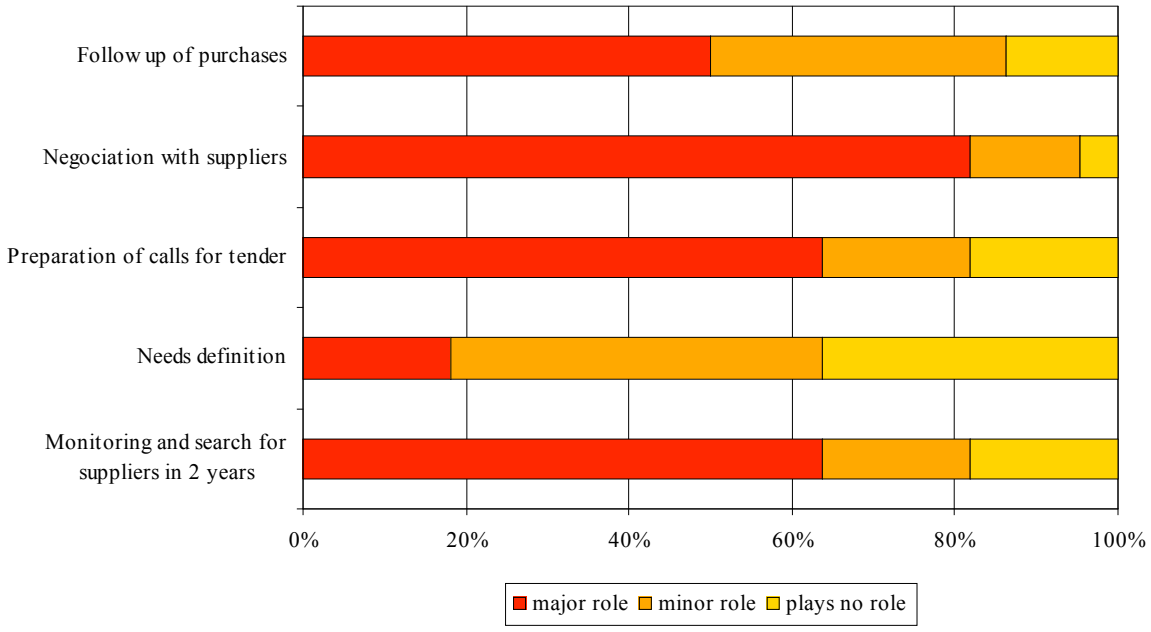

Figure 10: role of purchasing department for the next 2 years

3.2 Globalisation of Firms

3.2.1 Activities

The companies studied possessed overseas sites for the most part, (headquarters, production sites, distribution sites, R&D sites and subsidiaries). The geographical reach by zone shows that apart from their presence in France and in the EU – with at least two sites as well as their HQ – these companies had, on average, 3 to 4 sites on other continents, spread equally over North America, South America and Central and Eastern Europe, with slightly fewer in Asia and in the Pacific zone. These companies, therefore, seem to be more oriented towards the markets in the "Triad" of Western Europe, North America and Asia-Pacific.

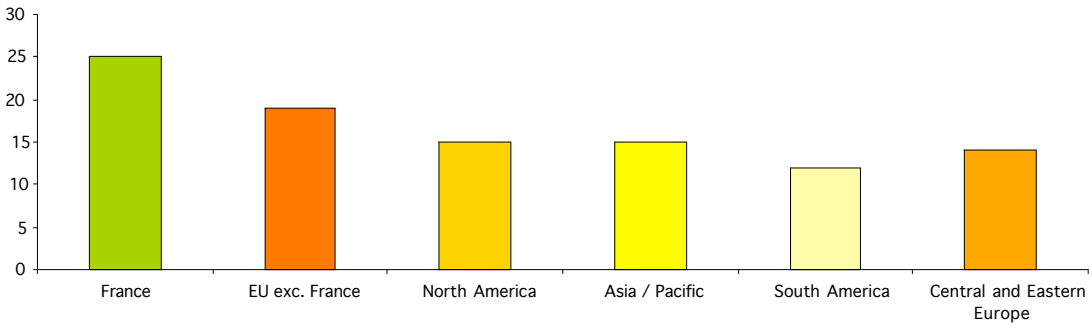

Figure 11: Geographical reach

Concerning the location of activities, it should be noted that R&D activities are carried out mainly in North America, the EU and in the Asia-Pacific zone. Production sites and subsidiaries are quite well dispersed over all continents, and most distribution sites are in Central and Eastern Europe, in the Asia-Pacific zone and in South America.

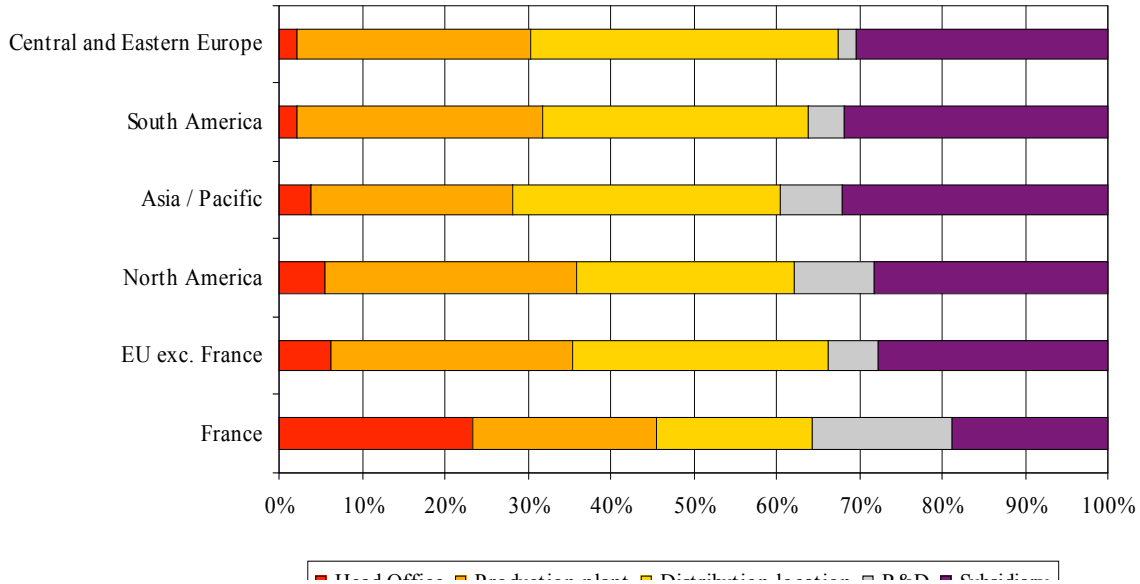

Figure 12: Type of location across the world

One can note that the companies, which replied to the questionnaire, favoured a multi-domestic international policy (production of most products and services in each market (Figure 13). It is in line with the predominance of the industrial and energy sectors in our sample.

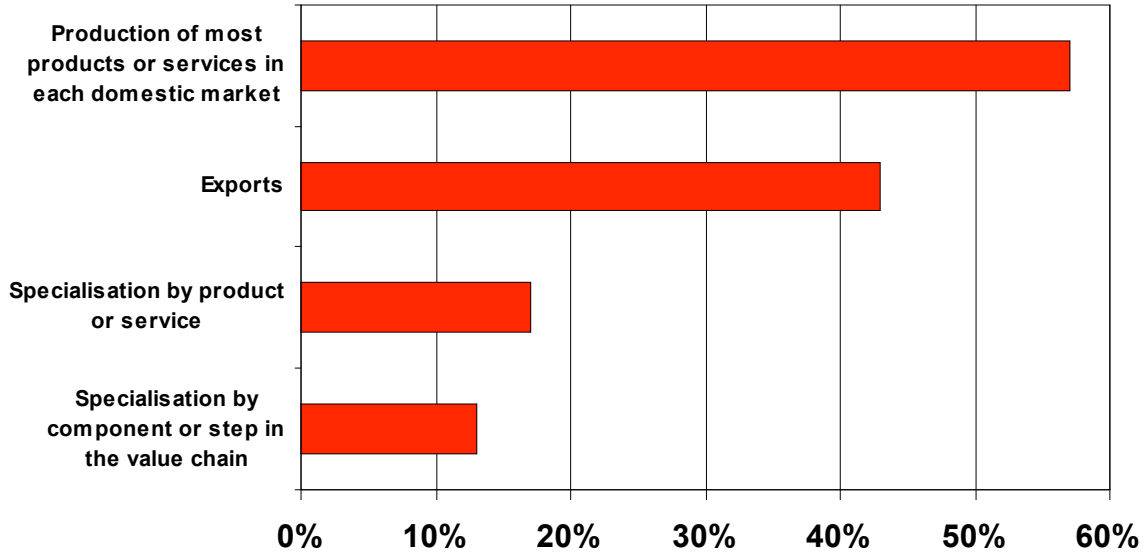

Figure 13: Pattern of internationalisation

3.2.2 Organisation

The level of centralisation of functions varies from high to medium, suggesting an organisation in a dual global-local way (Figure 14).

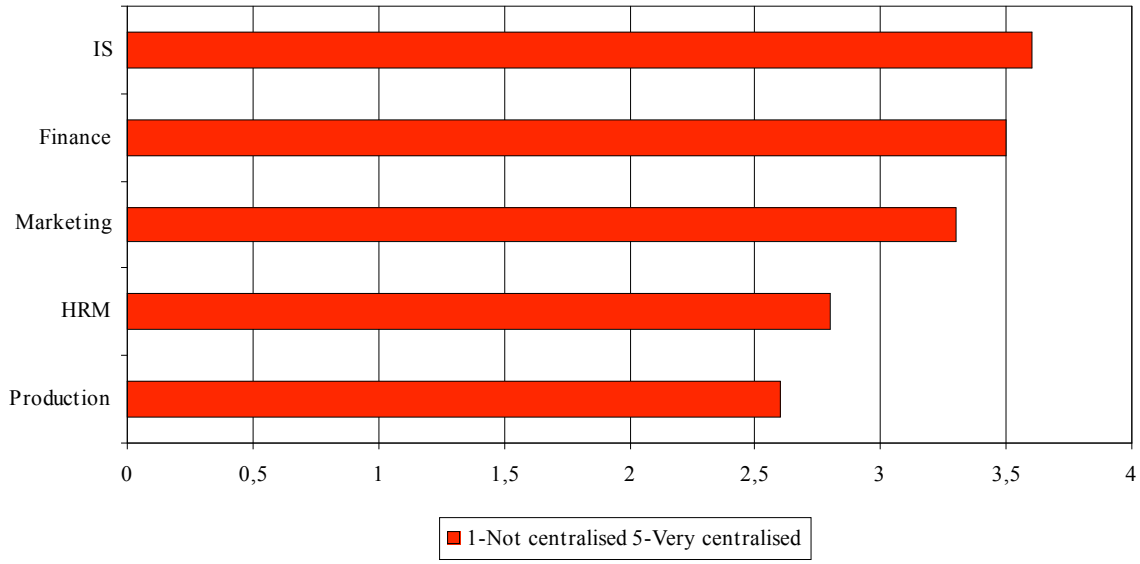

Figure 14: Centralisation degree of functions in the organisation

Most international communication is between headquarters and subsidiaries (35% of total), which underlines the need for co-ordination in order to ensure organisational coherence. We can also see a high level of communication between clients and distributors and clients and suppliers (24% of total).

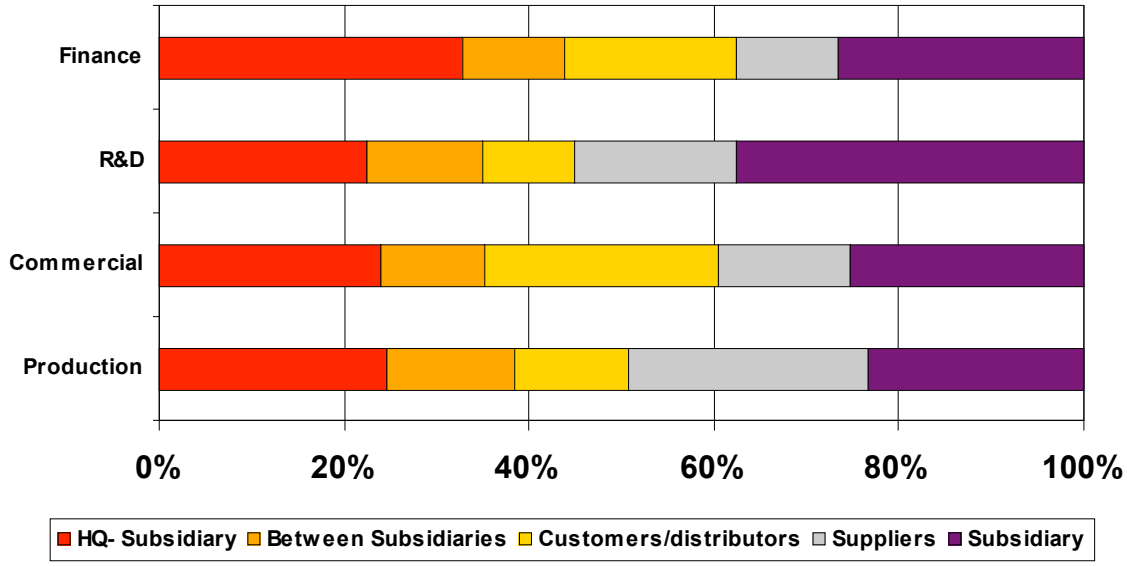

Figure 15: Type of communications flows between entities

3.3 Expectations and Suppliers

3.3.1 Expectations[3]

As for telecommunications solutions, the most important expectations are "price solutions", "geographical coverage", "expected lifetime and evolutions". "Homogeneity", "Simplicity" and "compatibility" are considered slightly less important. The ICT managers thus emphasise both the economical and technical aspects of solution. At first sight, it seems that only global or regional operators may be able to respond to such expectations (Figure 16).

[3] Most items are measured on a scale of importance going from 1 (not at all important) to 5(very important).

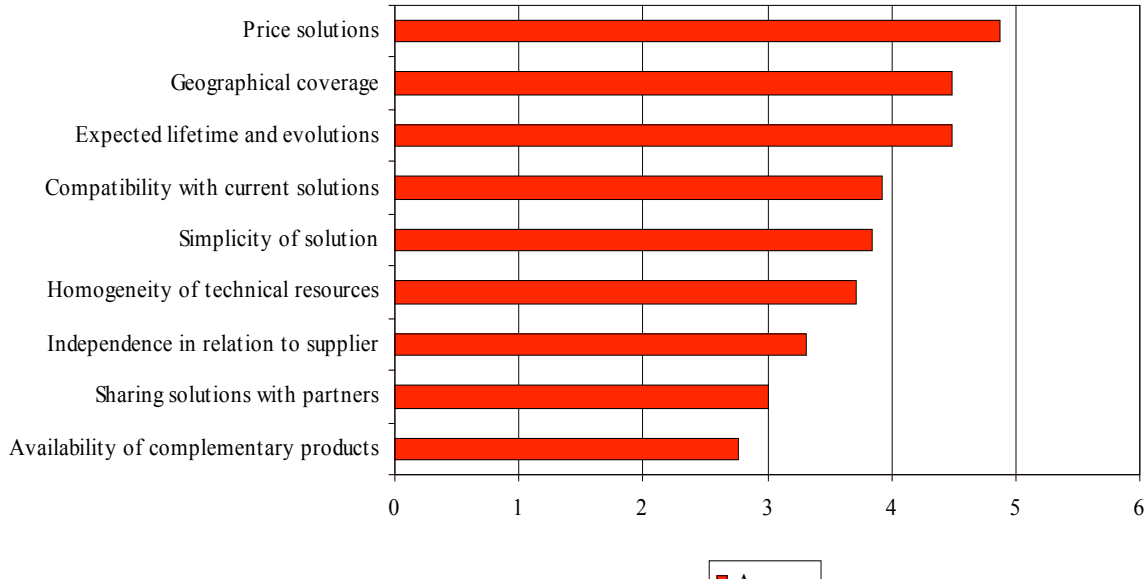

Figure 16: Expectations concerning telecommunications solutions

For the respondents, the most important expectations concerning suppliers are "geographical network coverage", "likelihood of continued presence", "local connection capability", and "seamless networking". Interestingly enough, outsourcing and consulting are of lowest importance but with important differences among respondents. Overall, what is expected from suppliers is to be a "real global" operator, capable of providing a whole set of services throughout the world, while remaining a stable partner (Figure 17).

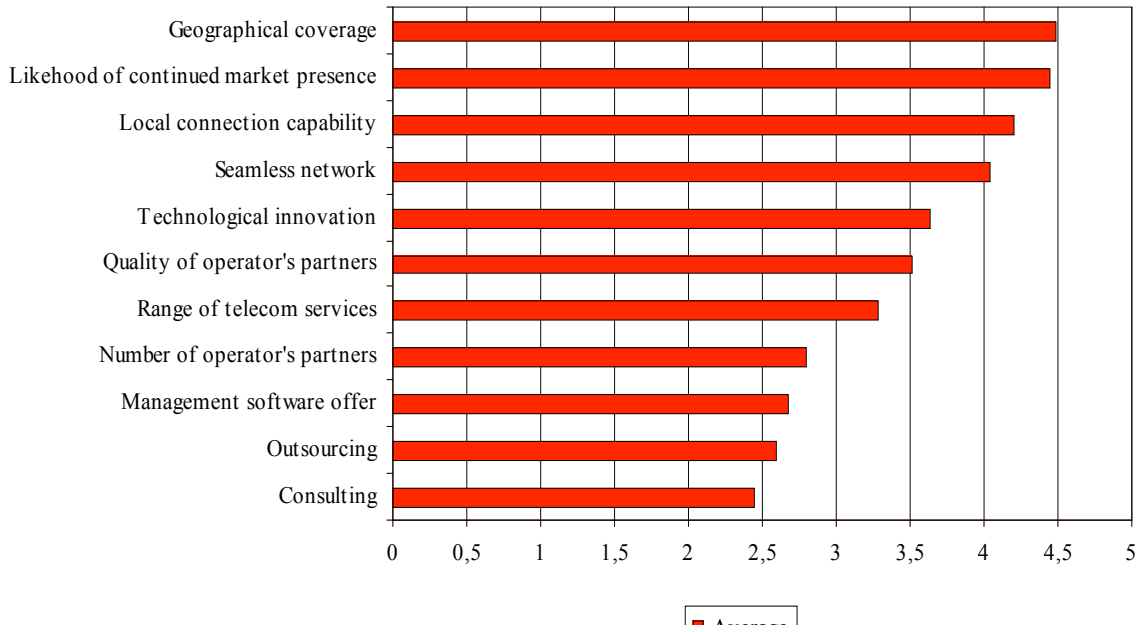

Figure 17: Expectations concerning suppliers

3.3.2 Suppliers

The satisfaction level for each item (Figure 18) mirrors the level of expectations in table 17, suggesting a close link between the two categories.

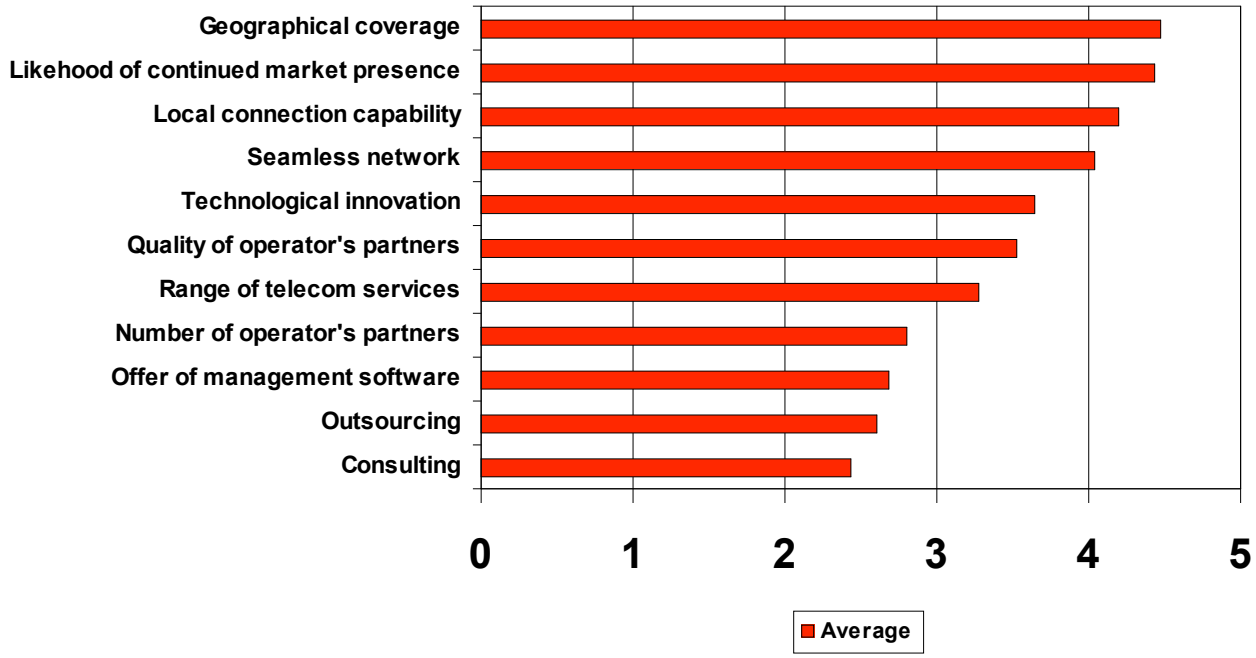

Figure 18: Suppliers satisfaction levels

As for the number of suppliers, the respondents expect relative stability by region and by type of service.

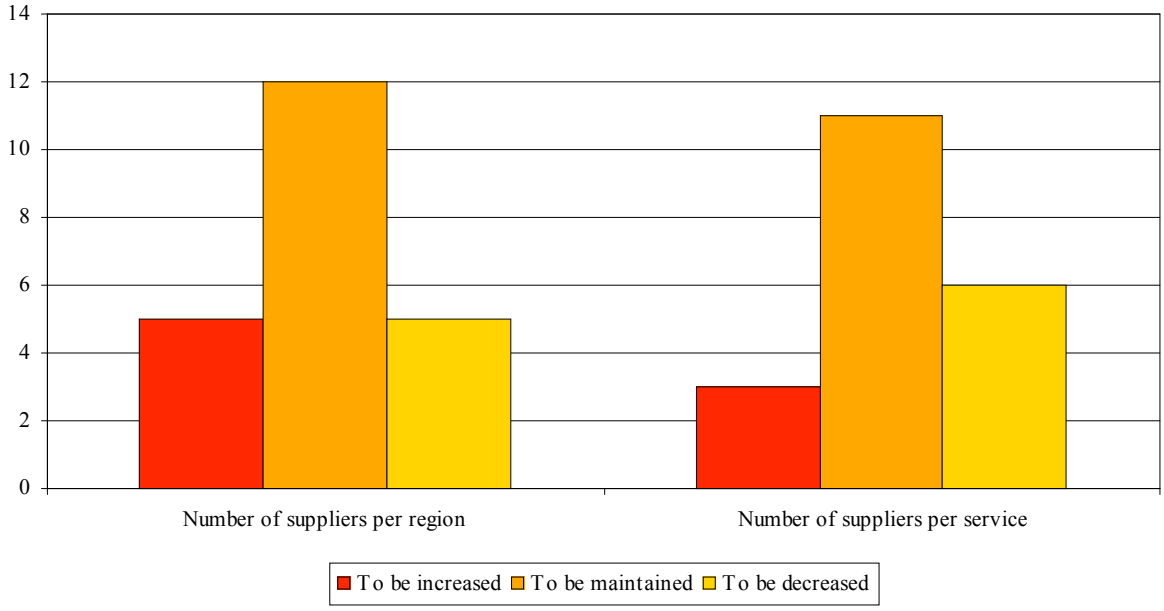

Figure 18: Evolution of the number of suppliers

4. Concluding Remarks

We have outlined some significant general trends for the management and procurement of international telecommunications services. However, it is also important to recall that each of these large organisations may be a specific case.

Several factors are likely to influence changes in how international telecommunications are managed within a company. Above all, it should be kept in mind that although any global approach will require the setting up of a standardised approach together with local and

regional management, in practice, the implementation may be very different, giving rise to different arrangements of activities (Lemaire 2003). In fact, globalisation is a complex process forcing companies to look for a certain operational flexibility (Kogut 1995) in order to face the uncertainty that so dominates the change in comparative advantages between countries as well as firms. Globalisation also fosters the emergence of new kinds of competition where new technologies can play a significant role. In fact, these technologies give companies the possibility to globalise their production, distribution and R&D activities by re-locating to more liberal locations where the costs of co-ordination in and among companies are lower (Antonelli 1988; Bartlett and Goshal 1988). Therefore, the communication flows, and especially international communications, may also be organised according to very variable models, to reply to the demands of the company and its business processes (Antonelli 1988; Yves and Jarvenpaa 1991). What is more, you have to take into account the company's attitude towards the telecom function and more generally, its IS. The direction given to the telecom function will be completely different depending on whether the telecommunication systems are considered a simple commodity or as a strategic resource (Hammer and Champy 1993).

The organisations of the company, its strategy and field of activity have a profound influence on its purchasing behaviour and on its telecommunications management. The dynamic of internationalisation can be justified in the search for an optimisation of production and distribution facilities. Naturally this approach leads companies to relocate all or part of their production to get closer to existing or potential areas of high consumption. Large companies are looking to limit the number of their service-providers, appreciating those who can offer them a continuous, homogenous service wherever they set up and thus accompany them in their own development. With this in mind, we understand that this is maybe not so much to reduce costs but more to provide co-ordination in order to ensure the technical uniformity of the network infrastructure. This is also the reason that regional and local operators are often the same, be it for voice, data or mobile communications. The organisation of the company and notably its legal status and its sphere of activity are also important. Whether it is a very centralised large company with a single activity or a holding company managing a portfolio of brands with a very marked policy of selective distribution, these companies do not have the same room for manoeuvre at the local level. As a corollary, the purchasing of telecommunications is not necessarily conducted at the level of the IS management, but might be dispersed among the different parts of the group or of the organisation in order to satisfy local objectives (such as mobility or QoS).

The degree of centralisation of the information systems and the place of the IS management, impact on the way in which telecommunications are managed. The place of the IS management and the degree of centralisation of decision-making are highly revealing of the change in the ways in which telecommunications are managed. Very centralised companies tend to put in place a more coherent network with a global view of the telecom resource. However, this approach may prove inefficient in very volatile environments where constant adaptation is needed between the company's IS and its strategy. In fact, by limiting local initiatives in the matter of equipment for example, a company may miss business opportunities that would allow it to reach its strategic objectives. This is why, in certain large companies interviewed, the IS management sets an objective and develops a shared strategic vision, allowing other parts of the company to manage the local infrastructure.

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