

STRATEGIC POSITIONING TAXONOMY: A SERVICE INTEGRATION PROPOSAL

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**Abstract**

The goal of this article is to join the theoretical contributions of operations management and economical theory for the analysis of the services strategic positioning. In the beginning this article presents the explanation about three services taxonomies with similar concept formation; these taxonomies are centered in the process perspective and the goal is to develop their contributions for the service strategic analysis. On one hand, it shows the operations vision in relationship to the client contact (COLLIER; MEYER, 1998), the process standardization and the production capacity (SILVESTRO, 1999). On the other hand, it shows the economic vision and it takes into consideration the relationship with the client (GADREY; GALLOUJ; WEINSTEIN, 1995), the grade of standardization and professional capacity (GALLOUJ, 2002), capital intensity and scale of operation (SILVA e MEIRELLES, 2009). As a result, it proposes an integration matrix based on three variables: capital intensity, scale and client's contact.

**Keywords:** services, capital intensity, client relationship, scale, processes, strategic positioning.

## **1. Introduction**

The literature on services presents a series of proposals for classification of activities, not always convergent or complementary, when related to the characteristics of services.

This article is driven by the hypothesis that, within the scope of some selected classification proposals mainly in Operations Management and Service Economy, a convergence and complementarity toward an integrated vision of services strategic positioning can be noticed. This convergence happens because a similar conceptual approach that envisages service as a process is adopted.

The article is structured into three parts, besides the introduction and the final considerations. The first part presents the main conceptual and classification proposals found in the literature on operations, and on economic theory. In operations management, authors such as Shostack (1987), Silvestro (1999), Collier and Meyer (1998), and Zarifian (2001) were highlighted, while economy driven authors like Gershuny and Miles (1983), Nusbaumer (1984), Walker (1985), Marshall (1988), Gadrey, Gallouj and Weinstein (1995), and Meirelles (2003, 2006a) were focused.

The second part of the article presents two typologies of services strategic positioning, one within the literature on Operations, based on the contributions by Silvestro (1999) and Collier and Meyer (1998) and another within economic theory, with Miles (1993), Gallouj (2002) and Silva e Meirelles (2009) as sources.

The third part consists of a presentation of an Integration Matrix based on the combination of three variables: invested capital intensity, technological intensity and customer contact intensity. Grounded on this Matrix, a strategic positioning of services is presented.

## **2 Proposals for a Service Activities Classification**

The literature on services both on operations and on economy administration presents a series of proposals for classification of those activities (Picture 1). Despite the diversity, strong complementarities are noticed among some of the approaches, especially those related to the service provision process.

**Picture 1. Summary of the Proposals for Service Activities Classification (operations and economy visions)**

<b>Author (s)</b>	<b>Classification</b>	<b>Classification Criterion</b>
Shostack (1987)	<ul style="list-style-type: none"> <li>• Central services: represent the organization core business</li> <li>• External services: ancillary services to support central services</li> </ul>	Process complexity and diversity
Silvestro (1999)	<ul style="list-style-type: none"> <li>• Mass services: high volume of customers assisted and low variety of services</li> <li>• Services Store: medium volume of customers assisted and average variety of services</li> <li>• Professional services: low volume of customers assisted and high services variety.</li> </ul>	Organization's productive volume and variety (group of service characteristics)
Collier e Meyer (1998)	<ul style="list-style-type: none"> <li>• Customer routed service: customer has high degree of freedom to select a service encounter activity sequence.</li> <li>• Co-routed service: moderate number of stages (pathways) in the provision of services to customers</li> <li>• Provider routed service: high degree of management control into the service system.</li> </ul>	Number of pathways created by the management and service encounter activity sequence.
Nusbaumer (1984)	<ul style="list-style-type: none"> <li>• Primary services: supplied by factors of production in all economic activities.</li> <li>• Intermediate services: related to the marketing and distribution of goods and other services.</li> <li>• Final services: related to final consumer welfare and quality of life, including public health, safety and education services.</li> </ul>	Role and position in the circuits of production and exchange
Marshall (1988)	<ul style="list-style-type: none"> <li>• Information Processing Services;</li> <li>• Services related to production of goods and merchandise;</li> <li>• Personal support services</li> </ul>	Expertise content and performed function.
Walker (1985)	<ul style="list-style-type: none"> <li>• Production supporting services, which result in concrete and tangible products.</li> <li>• Logistic, work, money, information services, and those related to rent and asset ownership transfer.</li> <li>• Services essentially based on work (labor services).</li> <li>• Government services.</li> </ul>	Bond established in productive process and final result (tangible or intangible)
Gadrey, Gallouj e Weinstein (1995)	<ul style="list-style-type: none"> <li>• Quasi-goods: standardized solutions, with different possibilities of precision.</li> <li>• Customized Services: different solutions, customized to meet client's needs</li> <li>• Co-production: customers' participation in the provision of services.</li> </ul>	Nature of customers solution. Emphasis in service relationship.
Gallouj (2002)	<ul style="list-style-type: none"> <li>• Quasi-goods: standardized services that demand high degree of professional training</li> <li>• Quasi-goods, packages, operations or manual services: standardized and demand intermediate or low degree of professional training</li> <li>• Operational or manual (custom-made) services, informational or relational services: non-standardized services that demand intermediate or low degree of professional training</li> <li>• Intellectual or professional services: non-standardized services that demand high degree of professional training.</li> </ul>	Degree of professional training and standardization.
Meirelles (2006)	<ul style="list-style-type: none"> <li>• Pure service: implies carrying out a single and exclusive work. The result of the work process is the work itself, not necessarily a resulting product.</li> <li>• Service of Transformation: implies carrying out the necessary work to transform inputs and raw materials into new products.</li> <li>• Exchange and circulation services</li> </ul>	Nature accomplished work and bond with production, exchange and circulation stages.

Source: Adapted by the authors.

The administration of processes authors analyze the complexity of processes of services, on one hand, mainly focusing to identify the core competence of the organization - central *versus* external services (SHOSTACK, 1987). On the other hand, complementary visions focus on the productive

processes characteristics, and on the choices among mass or large volume, and customized service offer (SILVESTRO, 1999; COLLIER; MEYER, 1998).

In the scope of economy, service activities classifications examine a variety of aspects, both in supply and demand, including the functions carried out by services and their target audience (NUSBAUMER, 1984); the characteristics of the production process and its outcome, if tangible or intangible (WALKER, 1985); or still, the expertise content (MARSHALL, 1988), the nature of customer relationships and the varied types of solutions (GADREY; GALLOUJ; WEINSTEIN, 1995), and the degree of professional training, besides service product (outcome) standardization (GALLOUJ, 2002).

Based on a perspective of service essentially as a work process, Silva e Meirelles (2006a) propose a classification of services according to the nature of the work accomplished and its connections with the production, exchange and circulation stages. In the author's vision, service is work in its wide and fundamental sense, and can be accomplished not only through human resources (human labor) but also through machines and equipment (mechanical labor). In this sense it is a proposal of classification that seeks to integrate services into economic processes. In all the stages of the economic processes in which work takes place, there is a service potential, although for this potential to take place the work process involved has to be an autonomous economic activity, which is structured on a contractual arrangement (formal or informal), with a goal to provide service.

Furthermore, according to Silva e Meirelles (2006a), once service is a work process, one can possibly distinguish the service from the product to which it is associated, as well as from the assets and inputs used in the productive process. "Service can only be characterized as such as long as there is work to be accomplished, regardless of the inputs used, whether tangible or intangible, or if working methods used are human or mechanic." As presented in item 3 of this article, this vision offers a competitive strategies approach to services according to capital intensity and scale of operation, aspects traditionally considered in manufacturing, although mostly ignored when dealing with services.

## **2.1 Operations vision**

From the Operations' point of view, service is the most efficient resources organization and mobilization to interpret, understand and generate the targeted changes of conditions of client user's activities (ZARIFIAN; 2001b). According to Fitzsimmons and Fitzsimmons (2000), although sometimes difficult to identify, there is a distinction between goods and services. The authors use a services classification based on client interaction, and labor intensity. Thus, they highlight the following special characteristics that differentiate services from goods:

- The client participates in the process of service provision: instead of being a passive client, they become a product (service) aggregator.
- Simultaneous production and consumption of service: once the client is active in the service provision process, there is simultaneity between production and consumption.
- Capacity perishability: services operate within an open system, with demand variation full impact being transmitted to the system.
- Selection of location based on clients: the service provider and the client need to meet; therefore, the possibility of client's access has to be considered when selecting locations.
- Labor intensity: when the activity is people-centered, it demands more experience from the service provider; automation can eliminate interpersonal relationships, although it requires more attention towards work, which can cause variation in the service.
- Intangibility: services are activities, while goods are objects, thus, they constitute a problem for clients who will not be able to test their efficiency and will have to rely solely on the services provider's reputation.
- Difficulty to measure production: considering that services rendered are different according to client, no matter how standardized services are, their evaluation must be carried out by monitoring or market survey.

Edvardsson et al. (2005) criticize some of the mentioned services characteristics as being widely known to business. The authors argue that those characteristics are more associated to the difficulties faced at delivery by services providers, than to clients' problems solutions, once:

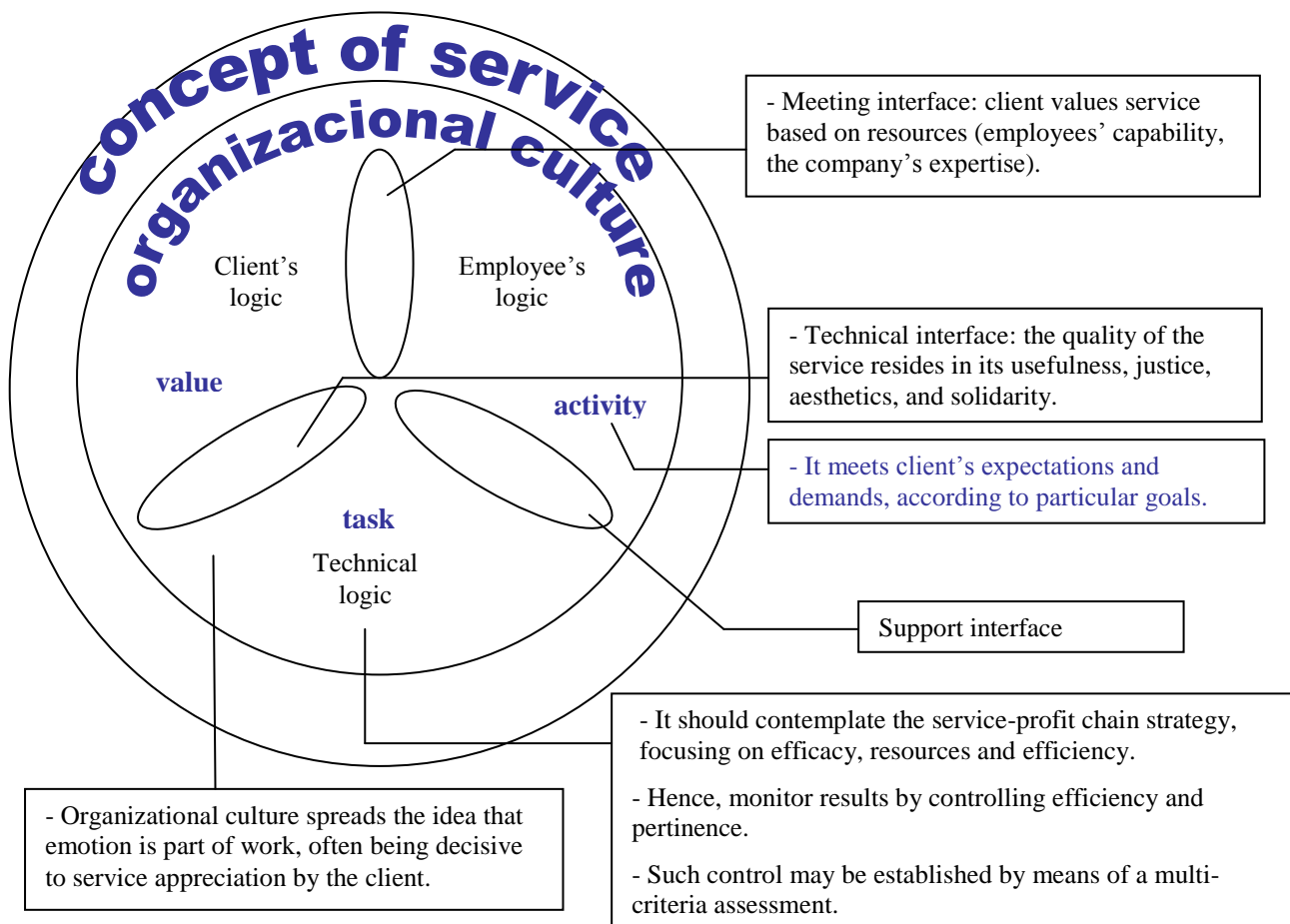
- There is a range of services that do not require the client's presence to be accomplished, such as, repair and transport of varied goods, or dry-cleaning, and that does not justify generalization of inseparability.
- Perishability is not applicable to most services that involve information, because it can be "stored" and accessed at different moments.
- Information technology has been homogenizing services provision, which challenges the idea of heterogeneity.
- Goods are frequently associated as key factors of quality of services dimension, contradicting the intangibility issue.

Nevertheless, in spite of the flaws in generalization, the authors recognize that the characteristics associated with service provision display, even if not comprehensively, that inseparability, perishability, heterogeneity and intangibility are still relevant, and their use important for a considerable range of services, depending on how they are portrayed, and what the purpose of their study is.

Shostack (1987) explains that services are not "things"; therefore, they ought to be noticed as processes instead of objects. As processes, they show the aforementioned characteristics (intangibility, perishability, simultaneity in production/consumption, and client's participation in provision of services). The author suggests two ways to describe the service provision process: one according to the stages and sequences that constitute the process (process complexity), and another in consonance with stages and sequence variability (diversity).

Kang and McDermott (2000) reiterate that services differ from manufacturing in four generic aspects: intangibility, heterogeneity, output perishability, and production / consumption simultaneity. This initial classification is viewed as too generic, highlighting the need to include people as part of the services system, likewise Shostack (1987) and Fitzsimmons and Fitzsimmons (2000). Thus, in general, services which are regarded as processes are basically analyzed in relation to the following dimensions: complexity/diversity, tangibility/intangibility, people / technology based; high/low demand, and client / service provider relationship tenure.

Figure 1 below presents a framework for analysis of front office service provision in organizations.



**Figure 1. Framework for analysis of front office work**

Source: KLEMENT (2007). Adapted from KINGMAN-BRUNDAGE, 1995; ZARIFIAN, 2001b; GADREY, 2001.

The framework for front office work analysis is based on Kingman-Brundage's triad (1995), composed by client's, employee's and technical logics. The service value can be acknowledged by the client's logic based on two aspects, according to Zarifian (2001b). When client and employee meet, service value can be apprehended through the employees' professional ability to identify and know the client user's activity, and to interpret and understand the problem of the service end-user. In the technical interface, according to Zarifian (2001b), the organization provides value to the client (and to society), when taking the consequences into account, in other words, when they offer services that meet assessment aspects such as usefulness, justice, solidarity and aesthetics.

Moreover, still according to Zarifian (2001b), in an approach to service value, management should comprehend pertinence (activities based on front office employee-customer relationship) with an intent to combine organizational objectives and client's expectations. It should also comprise efficiency and efficacy, technical logic concerns, which coordinate, respectively, clients' expectations with available organizational resources, and those with the services provider's objectives (support interface). From the relationship between the results achieved and the organizational resources, the entity can control its efficiency and pertinence.

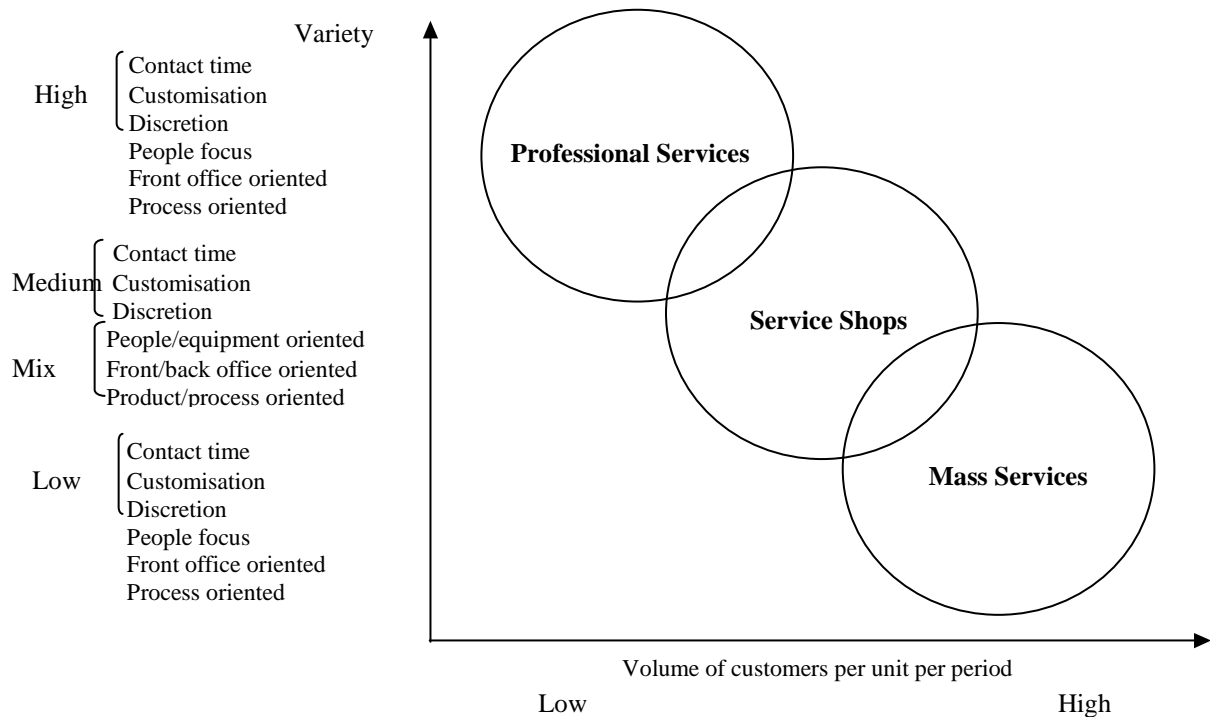
Those results not only represent control, but also a fundamental element in the concept of the service, according to Heskett et al. (1997). It can be used to equate the value of the service, increasing quality and reducing costs. As stated by Heskett et al. (1997), the strategy of the service-profit chain, should contemplate quality and productivity results (by means of employees' training and satisfaction, besides operational strategies) in order to increase service value, thus achieving client's satisfaction and loyalty, and, consequently, income and profitability growth for the organization.

Heskett et al.'s (1997) vision of strategic service consists of four elements:

- Identification of the target market segment;
- Development of a concept of service to contemplate the needs of target clients;
- Prioritization of operational processes to sustain the service concept;
- Projection of a delivery service system to support the operational strategy.

That strategic vision can couple a multi-criteria evaluation to monitor organizational pertinence and efficiency control. According to Gadrey (2001), technical, financial, relationship, ecological, innovation and reputation criteria can offer the service provider the necessary feedback about their productivity.

Silvestro (1999) proposes a services classification matrix, based on the organization productive volume – which is defined in the service process model as the volume of processed clients per business unit per period, - and by variety, which represents a group of service characteristics - focus on people/equipment, degree of client relationship, front office value-added, customization degree, degree of employee's discretion and focus on the product/process (see figure 2).

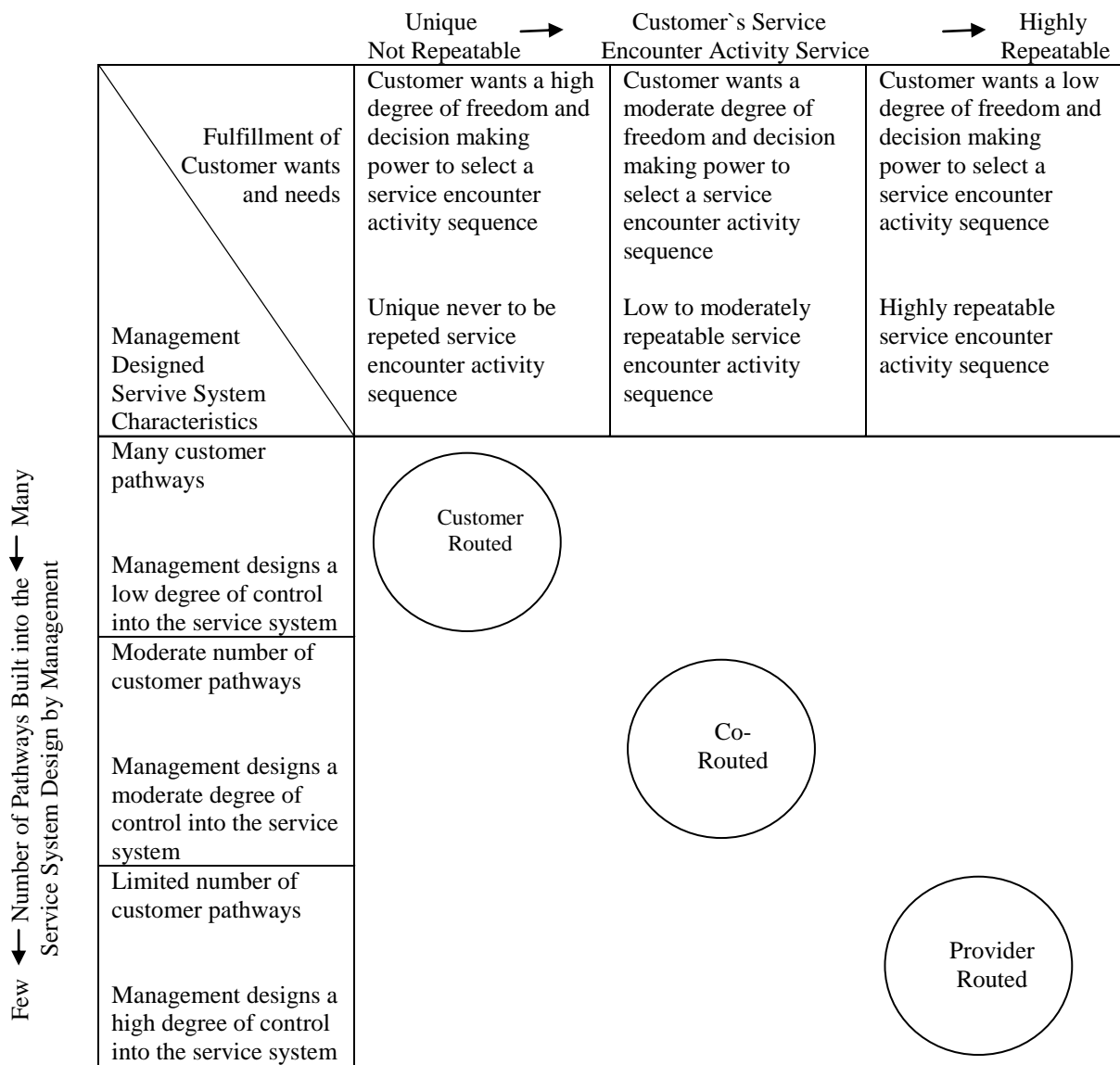


**Figure 2. The service process model**  
Source: SILVESTRO; 1999, p.401.

The framework illustrated above has been presented and discussed among academics since 1992, and it is an adaptation of the product-process matrix proposed by Hayes and Wheelwright (1979) for services. Collier and Meyer (1998) criticize that model in one of their papers, arguing that the relationship between product and process inexists in many services. Among the examples mentioned by the authors is the rise in hotel companies' turnover that increase number of units without modifying their processes.

They also criticize the complexity of the six dimensions that compose the vertical axis. The authors find it is not clear how these six dimensions are defined within a single axis. On the other hand, they do not fail to acknowledge that as technological information capacity increases, service volume can be more related to decisions regarding the process design, particularly in high information volume businesses.

From the analysis of that matrix and the study of other authors (Schmener, 1986; Tinnila and Vepsalainen, 1995; and Kellogg and Nie, 1995 apud COLLIER and MEYER, 1998), Collier and Meyer (1998) propose a new service positioning matrix, which is based on two axes: the vertical axis that portrays the number of pathways built into the service system by the management; and the horizontal axis, which portrays the customer's service relationship activities' sequence. (Figure 3)

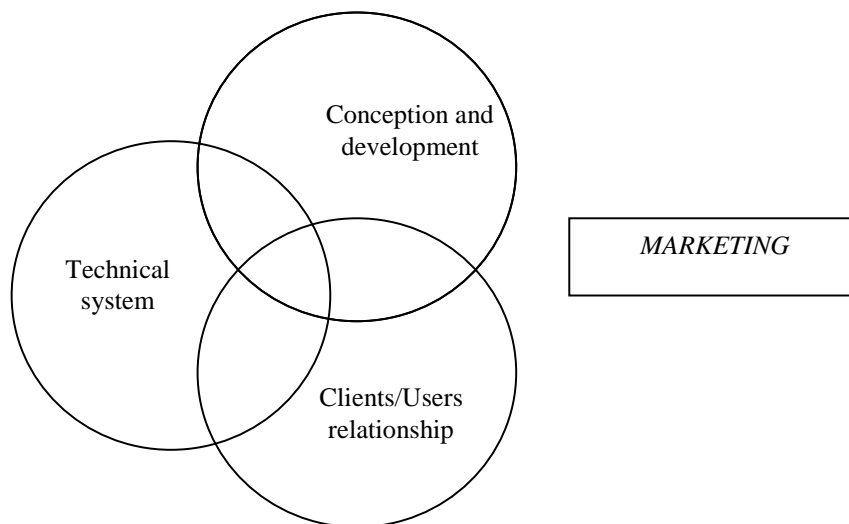


**Figure 3. The service delivery system matrix**  
 Source: COLLIER and MEYER; 1998, p. 1231.

Thus, the authors present a classification for service companies based on three aspects: the process derives from the nature of customer wants; the service performance results are read in the diagonal scale of the matrix; the two axes are conceptually independent. Therefore, the authors classify services into three types: customer routed, co-routed (client and organization address the service) and provider routed.

Besides the final demand, there is a growing intermediate services demand by the organizations due to the role of information and expertise in society, and also because the companies are favoring purchase over doing. The industry has discovered and is now incorporating the notion of service, and so is the services sector, which is becoming more industrialized (ZARIFIAN; 2001a). In that way,

services organizations, as well as industrial organizations are composed by three major activities: the conception of new technologies and new products and services; the great technical systems that ensure actual production of products and services, and the direct clients / users relationship (Figure 4).



**Figure 4. The three production activities**  
Source: ZARIFIAN; 2001a, p.93.

Taking into consideration that for service to be efficient, integration among the three dimensions previously mentioned is important. Firstly, one needs to interpret and understand client user's expectations so that a group of techniques to gather information can be developed and, finally, a distinction between innovation regime (for prospect clients) and routine regime (existing services ways and forms) can be established. When interpretation and understanding demand that differentiated solutions for the client users to be devised, it is said that the solutions should be created to meet a client users' non satisfied needs, in which innovation plays its role.

## **2.2 Economic vision**

The economic literature on services has basically focused on Economic Development, discussing aspects related to the productivity and impact on job generation and income. In Industrial Economy there are few works related to the market dynamics of these activities, in terms of

competition degree, market strategies, production unit organizational structures and market regulation, etc.

Among the restricted group of authors that deal with the aspects of services market, it is worth mentioning the works of Miles (1993) and Meirelles (2003). On one hand, Miles (1993) highlights the specificities of the production process and the sector's market organization. On the other hand, Meirelles (2003) deepens the understanding of the competition structural constraints in services, proposing a market structures typology for the sector.

In Miles' vision (1993), the services present a series of feature specificities in the production, product and consumption, as well as in the organizational structure itself and market regulation. As shown in Table 1 below, within the production process, the following characteristics stand out: the inter-activity between producers and users; the intensity in the use of human resources - which does not apply to every type of process -, and derived organizational problems, particularly those related to the control of the productive process. Among the product characteristics, the most specific include intangibility, intensive use of information, the unstockability and customization. Last, in what refers to the market characteristics, a variety of production organizational structures stands out, both in terms of company arrangements (public, private or mixed), as well as in terms of company size and performance.

*Table 1. Services specific characteristics and attributes*

<b>Production Process</b>	<ul style="list-style-type: none"> <li>▪ Heavy investments in buildings and constructions: need of physical space for the integration producer-user.</li> <li>▪ Some are intensive in skilled and highly qualified labor, others no.</li> <li>▪ The organization of the work process is always problematic because it is difficult to control and thoroughly manage the process.</li> </ul>
<b>Product</b>	<ul style="list-style-type: none"> <li>▪ Intangible and intensive in information</li> <li>▪ Unstockable and difficult to transport. Process and product are practically indistinguishable.</li> <li>▪ Almost always customized, meeting consumer market's specificities.</li> </ul>
<b>Consumption</b>	<ul style="list-style-type: none"> <li>▪ Immediate production and consumption in time and space.</li> <li>▪ Production depends on client's specifications as for design and for production process itself.</li> </ul>
<b>Market</b>	<ul style="list-style-type: none"> <li>▪ Market organization varies, from public government-managed services to private small scale services operated by family.</li> <li>▪ As a rule, there are market regulation provisions and institutional mechanisms, aiming to protect the client and guide them in their consumption decisions. They face impracticability of previous product demonstration</li> </ul>

Source: Miles; 1993.

The fundamental aspect of Miles analysis is diversity. All the specific characteristics pointed out (intensive use of labor work, unstockability, customization, etc.) can be more or less preponderant depending on the service that is being analyzed.

Gallouj (2002) proposes a typology based on two vectors: degree of standardization of the service and degree of professional training. As shown in the diagram below (Figure 5), the author classifies service provision in four groups, based on those criteria: quasi-goods; quasi-goods, packages and manual or operations services; operational or craft services; and intellectual or professional services.

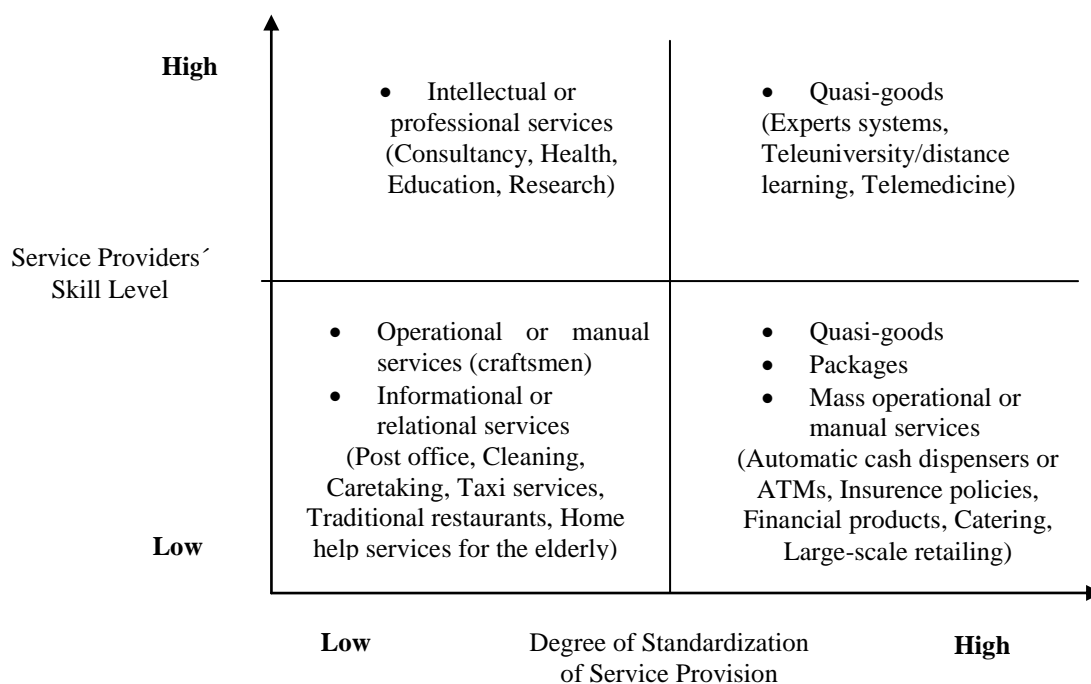
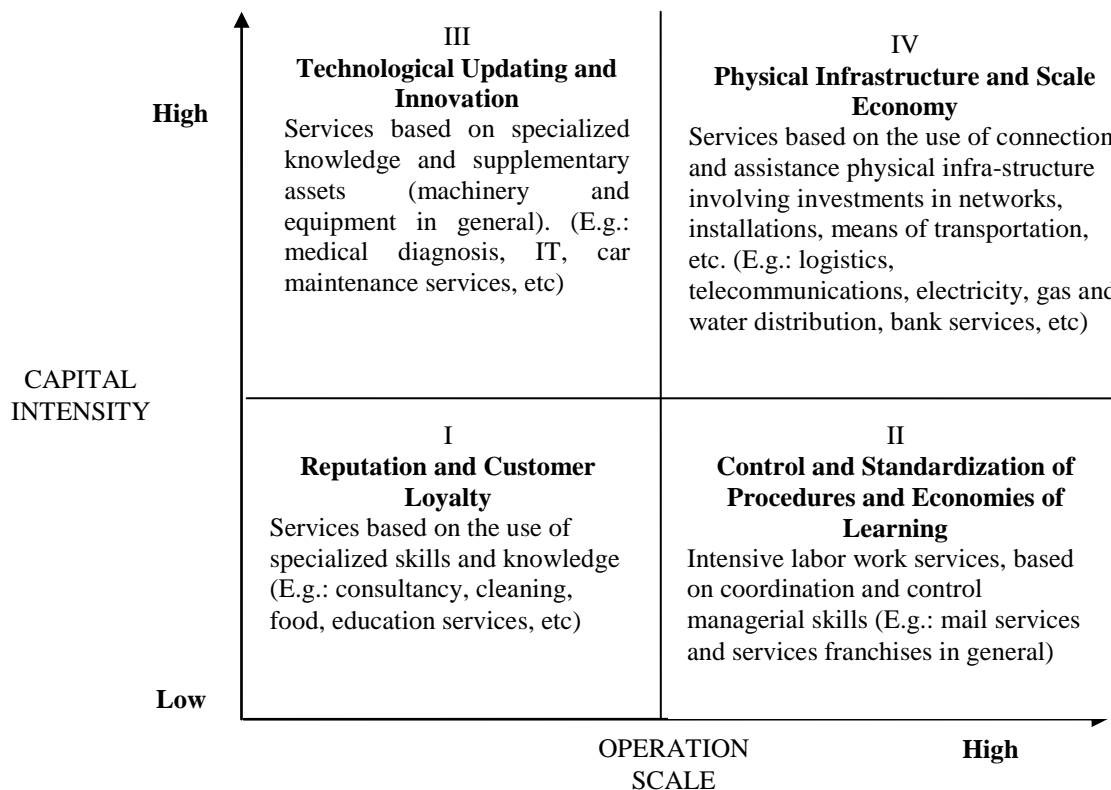


Figure 5. A typology of “products” by degree of standardization of service provision and service providers’ skill level  
Source: GALLOUJ; 2002, p.44.

For the purpose of this article, Gallouj’s proposal (2002) won't be explored, because despite the level of professional training, the author's focus is not the process of services provision, but the description of the product resulting from this process.

Still within an economic perspective, Silva e Meirelles (2009) propose a services competitive strategies matrix based on two variables: capital intensity and operation scale. It is based on the assumption that investment in capital and technological development is a structural tendency of the

services sector in modern economy, rather than an external influence, originated from the industry's technological developments. In this perspective, the services strategic possibilities are expanded, especially in regards to exploring scale economies, and profiting from productivity. Figure 6 below presents four strategic possibilities identified in services: i) Reputation and Customer Loyalty; ii) Control and Standardization of Procedures and Economies of Learning; iii) Technological Updating and Innovation; iv) Physical Infrastructure and Scale Economy.



**Figure 6. Matrix of Competitive Strategies in Services**  
 Source: Silva e Meirelles (2009)

Great part of the service companies is positioned in quadrants I and III, in other words, small and medium businesses, with low operation scale. Companies in quadrant I are traditional services providers, based on the use of specialized skills and expertise, but low technological content. Quadrant III concentrates companies of a more technological profile, where the service rendered is more intensive in capital, supported by complementary assets.

In quadrants II and IV we find the service companies that opt for large scale operation, supported by managerial coordination skills and high investments. In the case of quadrant II (low

capital intensity), the companies are usually structured in wide branch network or third parties with franchise contracts, for instance. Companies of high capital intensity (quadrant IV), on the other hand, are supported by a physical network of cables and wires, such is the case of telephony and electric power distribution. In these two cases, of low or high capital intensity, exploration of scale economy is the main source of competitive advantage.

In the cases of low capital intensity, economy of scale relates mainly to shared work earnings, depending, therefore, on people and processes managerial abilities, which can be called economy of learning. In the case of high capital intensity, the economy of scale is a natural outcome of the assets own nature, which are highly specific and indivisible, in other words, they are network economies (SILVA e MEIRELLES, 2009).

The capital intensity and the operation scale are considered the main sources of entrance barrier in the traditional literature of industrial organization, based on investment costs or even on technology domain (SCHERER and ROSS, 1990).

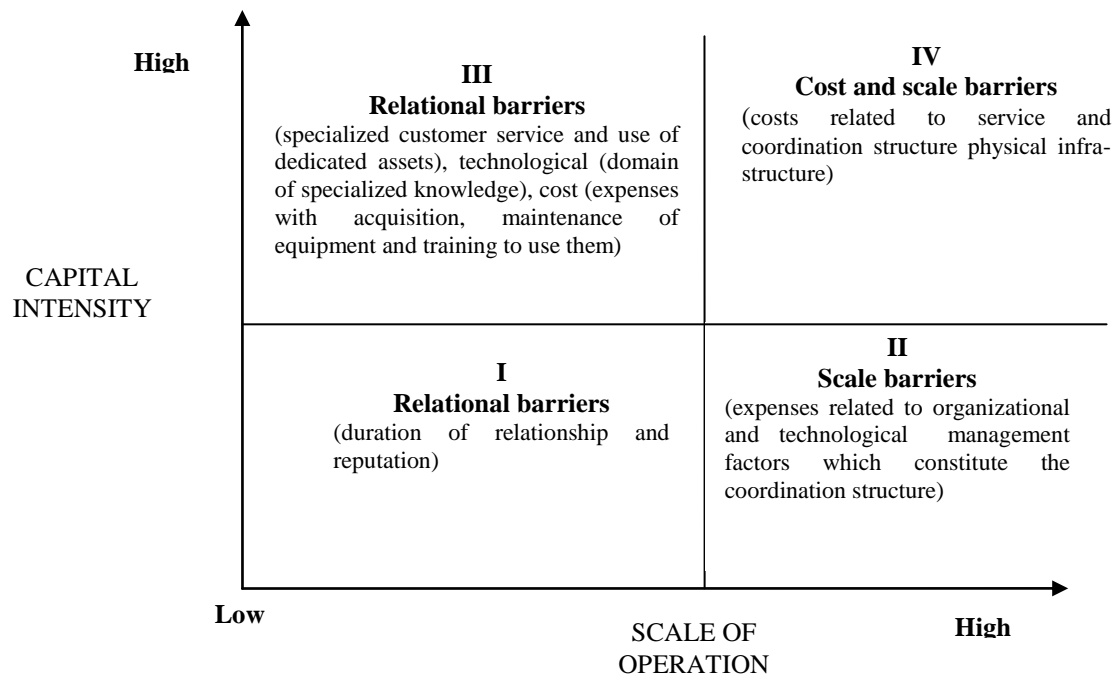
Following the same theoretical line, Silva e Meirelles (2009) propose that the nature of the barriers and the degree of entrance difficulty in services can be analyzed according to capital intensity and operation scale. The larger the capital intensity, the larger the expenses in back office, related to the construction and operation of physical connection networks. In these cases the typical barrier of entrance is costs and the associated strategy is to reduce costs, in the sense of exploring all costs advantages. On the other hand, the smaller the capital intensity, the larger the investments in front office, related to the expenses in activities that provide satisfaction and loyalty, as is the case of expenses with training and marketing. In these types of services, relational barriers prevail and the associated strategy is differentiation, defined by expenses that guarantee the companies position in the market.

Relational barriers are a result of the bonds established between service provider and user. These bonds are fundamental in establishing advantages of users' preferences, because, they are ultimately the warranty that the service's final result will meet the expectations. There are situations in which bonds demand investments in activities that provide satisfaction and fidelity, as it is the case of

expenses with training, marketing, etc. However, these expenses do not constitute a relevant factor of entrance impediment. Usually the impediment to the entrance is gagged by the duration of the relationship and by the company's reputation. Recommendations by third parties are very common in these cases, since they know the quality of the service rendered (SILVA e MEIRELLES, 2009).

It is important to observe that in situations of high capital intensity, the exploration of economy of scale will not necessarily take place. And vice-versa, favorable situations for the exploration economies of scale do not necessarily derive from high capital intensity. They are situations in that the competitive advantage is in the exploration of managerial aspects that allow large scale supply. This is the case, for instance, of mail services and some franchise service.

Figure 7 below shows a matrix proposed by Silva e Meirelles (2009) in which four types of entrance barriers are identified: relational; cost and or technological; and of scale. In situations of low capital intensity and small operation scale (quadrant I), relational barriers prevail. Relational barriers can be reinforced in situations of high technological content, where the domain of knowledge is specific to that relationship, mainly when service provision involves the use of dedicated assets. This is the case of the companies in quadrant III. In these situations, besides relational barriers, there are technological barriers, defined by specialized technical knowledge, and cost barriers, due to expenses for the acquisition, maintenance and technological updating of machines and equipment, as well as in training to their use. The cost barriers are strongly present in situations of high capital intensity and large operation scale (Quadrant IV), though much more stressed than those verified in quadrant III, due to the high volume of investment and high risk involved.



*Figure 7. Matrix of Barriers of Services Entrance*  
 Source: Silva e Meirelles (2009)

### 3. A proposal for an Integration Matrix

The three proposals for classification of services according to strategic positioning previously presented are based on characteristics of the work process which are complementary and, similar in some cases. In his proposal, Silvestro (1999) pointed out the following characteristics: volume of processing, and customer contact intensity. From these variables, three types of services can be identified: professional (customized), service shops, and mass services (massification).

In Collier and Meyer (1998), the strategies used for the provision of services refer to customer's freedom to choose services from a number of management devised pathways, and the sequence of customer service encounter activities. This way, the services strategies can be customer routed (customer's higher degree of freedom to choose sequences), co-routed (customer and managers act jointly) and provider routed (management restricts the number of customer's pathways and choices).

Silva e Meirelles's (2009) strategies are related to the degree of capital intensity and scale of operation. In low capital intensity situations, two typical strategies can occur: reputation and loyalty (small scale); control and standardization of procedures and exploitation of economies of learning (large scale of operation). In situations of high capital intensity, strategies involve: technological

updating and innovation (small scale situations); physical infrastructure and exploitation of economies of scale, in large scale of operations.

Therefore, three are the aspects which are analyzed in those within the typologies: capital intensity, contact intensity and used technology.

The underlying hypothesis in Silvestro (1999), and Collier and Meyer's (1998) proposals is that the larger the technological intensity, the lower the contact with client tends to be, which allows for greater standardization. Silva e Meirelles (2009) consider the nature of the contact relevant, if personal or technical, and not the contact intensity, In this perspective, technological intensity can be mistaken for capital intensity - the more technical the contact is, the higher the capital intensity. However, high capital intensity does not always implicate in large scale service offer. What is relevant from the point of view of strategic positioning is the combination between capital intensity and the possibility of exploitation of economies of scale. In other words, contact can be personal at the same time that large scale service is rendered. Likewise, contact can be technical and service personalized.

Figure 8 below presents a proposition for an integration Matrix as a means of gathering the contributions from those three typologies, based on the combination of capital intensity and technological intensity into a single vector, since that incorporates technological intensity. The contact intensity is dealt with separately in another vector.

		High Contact		Low Contact	
		Low Capital Intensity	High Capital Intensity	High Capital Intensity	Low Capital Intensity
Large scale	<b>I</b>	- Control and Standardization of Procedures; - Reputation and Loyalty.	- Physical infrastructure and Exploitation of Economies of Scale -Technological updating and Innovation - Reputation and Loyalty	- Physical infrastructure and Exploitation of Economies of Scale -Technological updating and Innovation	- Control and Standardization of Procedures; - Exploitation of Economies of Learning
	<b>II</b>	-Reputation and Loyalty	-Technological updating and Innovation - Reputation and Loyalty.	-Technological updating and Innovation	<b>VIII</b> - Low cost and low quality

**Figure 8. Matrix of services integration strategy**  
Source: by the authors.

With this systemization it is possible to include strategy typologies exceptions and paradoxes that are proposed in the literature on operations management, and presented here. Regarding customization strategy both high and low contact intensity may occur, contrary to what most of the current literature defends. In general, customization and high contact intensity are associated, although services such as the most different types of repairs (clothes, for instance), or financial services in general, are clear examples of low customers contact intensity. That contact will usually only happen at "delivery", after a more intense back office service work generates a customized service,

In an inverse manner, massification, which is most of the time associated to technology and capital intensity, is also associated to low contact intensity. However, there are clear cases of massification and high contact intensity, like restaurant and franchise services in general, where processes standardization does not eliminate high contact with customer.

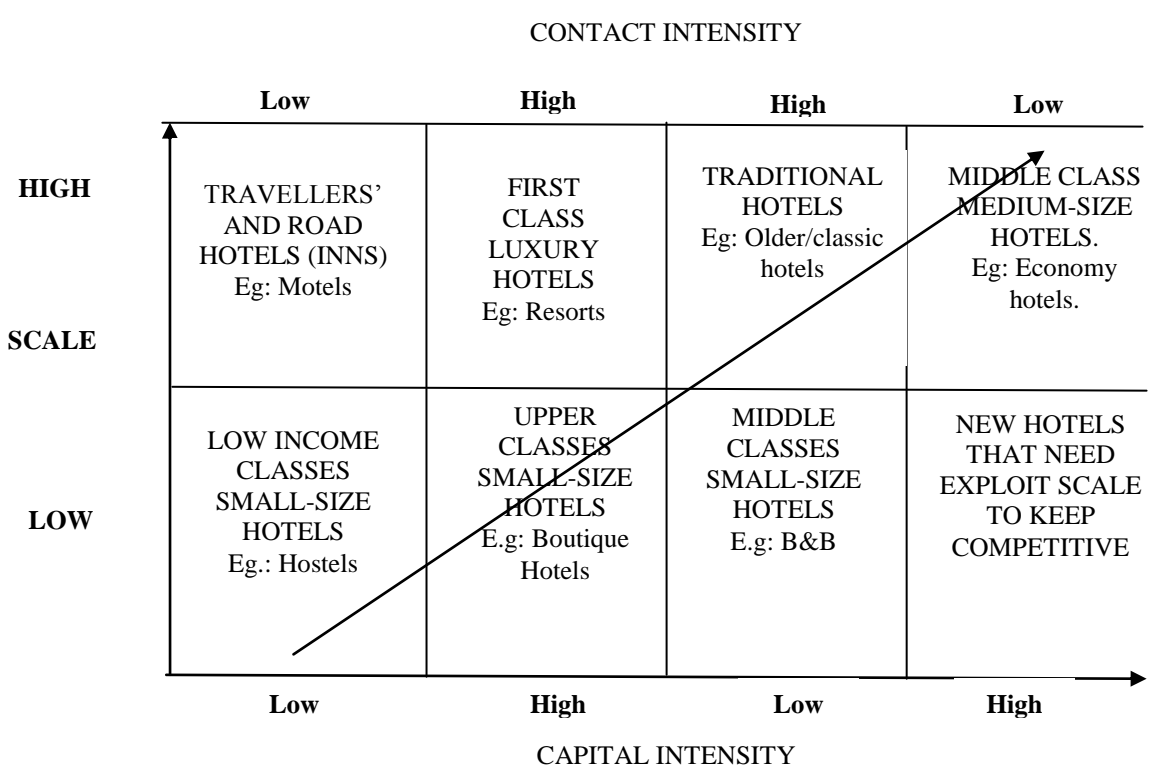
Studies and proposals of services classification and strategies also associate technology and capital intensity to services "industrialization". This is true in many situations, such as self-services in general. On the other hand, high capital intensity services which demand great contact intensity, like hospital services in general, should also be highlighted for their complexity and need for customer's "direct participation."

Another aspect that deserves attention is that technological intensity today no longer allows for dichotomy between customization and massification in the services operation process, even when contact is low. As an example, one can mention the services provided by Amazon.com, in which information technology allows for volume processing (mass) plus service personalization (customization according to customer's request).

Finally, it is worth noticing that differently from Gallouj's typology (see Figure 5), in which the degree of standardization and professional training is related to certain types of services (for example, consultancy services associated with high degree of training, yet low standardization), it is possible to implement in any service category a variety of business / service modalities, including standardization and customization, high or low operation scale, with high or low technological content.

This perspective deprives the business strategies in services of its sectorial character. For instance, high capital intensity in hotels, through the use of information technologies and integration management softwares, allows a high level of standardization and high processing capacity, without, necessarily, reducing contact intensity with customers.

Figure 9 below shows different forms of hotel services, according to different combinations between contact intensity, capital intensity, and scale of service processing, which generate different businesses strategies.



*Figure 9. Application of integration Matrix for hotel services*  
Source: by the authors.

In accordance with the integration Matrix strategy here proposed, the competitive advantages go beyond traditional visions of positioning which are based on cost and/or differentiation, as it includes innovation, above all. Actually, the competitiveness tends to be higher when the three advantages are associated, as indicated by the arrow in figure 9. The arrow indicates the direction of technological innovation and capital intensity. However, it is important to notice that companies do not necessarily follow the arrow path, in their pursuit of higher competitive outcomes. In the case of hotel services, it is possible to identify four positioning possibilities according to advantage factors such as:

1. Cost: low customer contact and low capital intensity, possible large scale operations (hotels along highways) or not (small-sized hotels for low income customers).
2. Differentiation: high contact and low capital intensity, possible large scale operations (traditional hotels) or not (small family hotels for high income customers).
3. Cost and differentiation: high contact, high capital intensity and large scale operations (upper class hotels and franchises).
4. Innovation: high capital intensity (services information systems through Internet, integrated management systems, and high investments in intelligent building structures), both in small operation scale (differentiation gains) and in large operation scale (cost gains). Paradigmatic examples: boutique hotels and low budget or super low budget hotels.

Despite a growing tendency for efficiency gains in detriment to differentiation, in the case of the hotel industry, mainly represented by the growth of the so-called budget hotels – organizations that invest heavily to standardize processes enough so to profit in scale-, this investment in efficiency through innovation has also greatly benefited hotels whose strategy is focused on the provision of low scale services. After all, back office processes standardization makes it possible to revert the investment in front office services customization and differentiation, as is the case of boutique hotels.

Another important aspect of the hotel industry is the market saturation of traditional and first class (luxury) hotels, as well as the great investment in intelligent building structures, two additional factors that benefit budget hotels, on the one hand, , and boutique hotels, on the other.

### **Final considerations**

This theoretical essay aimed to identify common elements present in some services strategies typologies in the literature on operations and economy, whose perspective is based on the services provisioning process. In that sense, managerial and customer relationship aspects, as well as economical and technological aspects were gathered.

Based on three strategic positioning typologies of services, namely, Silvestro's (1999), Collier and Meyer's (1998), and Silva e Meirelles's (2009), an integration Matrix was proposed, derived from

the combination of three variables: invested capital intensity, operation scale and customer contact intensity.

The Matrix proposes modalities of service provision, that include standardization as well as customization, small or large operation scale, high or low capital intensity. Eight service provision possibilities can be identified according to the combination of capital intensity, operation scale and degree of customer contact. For each of these combinations four strategies can be exploited:

- Reputation and Loyalty: strategies commonly explored in low capital intensity, high contact, and small operation scale processes.
- Physical infrastructure and Exploitation of Economies of Scale: strategies frequently adopted in situations of high capital intensity, low contact and large operation scale.
- Technological updating and Innovation: typical strategies for high capital intensity, both in large and small operation scale processes.
- Low cost and Low quality: strategy adopted by companies that opt for low capital investment, and small operation scale. Competitiveness tends to be higher as technological updating and innovation strategies are combined with investments in physical infrastructure and exploitation of economies of scale. However, it is important to notice that services companies do not necessarily position themselves in pursuit of growing competitiveness. Within the same industry, as it is the case of hotels, companies of different size, different efficiency levels, and varied market segmentation co-exist.

### **Bibliographical Reference**

BAIN, J. *Barriers to New Competition*. Cambridge (Mass): Harvard University Press, 1956.

BROWNING, H.C.; SINGELMANN, J. "The transformation of the US Labor Force: the interaction of industry and occupation". *Politics and Society*, Vol. 8, n° 3-4, p. 481-509.

COLLIER, D.; MEYER, S. "A service positioning matrix". *International Journal of Operations and Production Management*. v.18, n.12, 1998. p.1223-1244.

EDVARDSSON, B.; GUSTAFSSON, A.; ROSS, I. "Service portraits in service research: a critical review". *International Journal of Service Industry Management*. v.16, n.1, 2005. p.107-121.

- FITZSIMMONS, J.; FITZSIMMONS, M. *Administração de serviços*. 2. ed. Porto Alegre: Bookman, 2000.
- GADREY, J. Emprego, produtividade e avaliação do desempenho dos serviços. In: SALERNO, M. *Relação de serviço*. Produção e Avaliação. São Paulo: SENAC São Paulo, 2001. Cap. 1. p.23-65.
- GADREY, J.; GALLOUJ, F.; WEINSTEIN, O. “New modes of innovation: How services benefit industry”. *International Journal of Service Industry Management*. Vol. 6, nº 3, 1995. p. 4-16.
- GALLOUJ, F. *Innovation in the service economy: the new wealth of nations*. Cheltenham, UK: Edward Elgar, 2002. 226 p.
- GERSHUNY, J.I.; MILES, I.D. *The New Service Economy – The Transformation of Employment in Industrial Societies*. London : Frances Pinter, 1983.
- HESKETT, J.; SCHLESINGER, L. Parte I - A cadeia serviços-lucro: justificando a excelência. In: HESKETT, J.; SCHLESINGER, L. *Lucro na prestação de serviços*. 1997.
- HILL, T.P. “On goods and services”. *Review of Income and Wealth*. Vol. 23, nº 4, 1976. p.315-38.
- HILL, T.P. “Tangibles, intangibles and services: a new taxonomy for the classification of output”. *Revue Canadienne d’Economie*. vol. 32, nº 2, 1999. p. 426-446.
- KANG, H.; McDERMOTT, C. “A Classification Scheme of Services and its Implications for Technology Management in Services”. *Technology management: Strategies & Applications*. v.5, 2000. p.203-213.
- KINGMAN-BRUNDAGE, J. “Service mapping: back to basics”. In: GLYNN, W.; BARNES, J. *Understanding services management*. Chichester: John Wiley & Sons, 1995. Chapter 5.
- KLEMENT, C. F. F. Inovação em serviços: estudo de casos em uma organização da indústria hoteleira brasileira. São Paulo: USP, 2007. (Tese de doutorado em Administração).
- MARSHALL, J. N. *Services and uneven development*. Oxford: Oxford University Press, 1988.
- MARSHALL, J. N.; WOOD, P.A *Services & Space: Key Aspects of Urban and Regional Development*. Longman Scientific & Technical Publishers, 1995.
- MEIRELLES, D. S. “O conceito de serviço”. *Revista de Economia Política*. vol. 26, nº 1 (101), 2006a. p. 119-136.
- \_\_\_\_\_. Características das firmas e setores de serviço segundo a natureza do processo de trabalho. In: DE NEGRI, J. A.; KUBOTA, L. C. (ed.) *Estrutura e Dinâmica do Setor de Serviços no Brasil*. Brasília: Ipea, 2006b. p 349-375.
- \_\_\_\_\_. *O Setor de Serviços e os Serviços de Infra-Estrutura Econômica*. Universidade Federal do Rio de Janeiro, agosto, 2003. (Tese de Doutorado)
- MEIRELLES, D. S. “Estratégias Competitivas e Barreiras de Entrada em Serviços: uma proposta de abordagem teórica”. *Revista Angrad....* vol. 26, nº 1 (101), 2009. p. 119-136.
- MILES, I. “Services in the new industrial economy”. *Futures*. July/August, 1993. p. 653-72.
- NUSBAUMER, J. *Les services: nouvelle donne de l’economie*. Paris: Econômica, 1984.

RIDDLE, D. I. *Service-led Growth: The Role of the Service Sector in World Development*. New York: Praeger Publishers, 1986.

SHOSTACK, G. "How to design a service". *European Journal of Marketing*. v.16, 1982. p.49-63.

SHOSTACK, G. "Service Positioning Through Structural Change". *Journal of Marketing*. Jan., 1987. v.51, p.34-43.

SILVESTRO, R. "Positioning services along the volume-variety diagonal: the contingencies of service design, control and improvement". *International Journal of Operations and Production Management*. v.9, n.4, 1999. p.399-420.

WALKER, R. "Is there a service economy?". *Science and Society*. Vol 49, nº 1, 1985. p. 42-83.

ZARIFIAN, P. Mutação dos sistemas produtivos e competências profissionais: a produção industrial de serviço. In: SALERNO, M. *Relação de serviço*. Produção e Avaliação. São Paulo: SENAC São Paulo, 2001a. Cap. 2. p.67-93.

ZARIFIAN, P. Valor, organização e competência na produção de serviço – esboço de um modelo de produção de serviço. In: SALERNO, M. *Relação de serviço*. Produção e Avaliação. São Paulo: SENAC São Paulo, 2001b. Cap. 3. p.95-149.