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ASSESSMENT OF SERVICE QUALITY IN SUPPLY OF PHARMACEUTICAL PRODUCTS

Ana Lúcia Martins (corresponding author)

Instituto Universitário de Lisboa (ISCTE-IUL), Business Research Unit (BRU-IUL)
Av das Forças Armadas, Edifício ISCTE
1649-026 Lisboa, Portugal
E-mail: almartins@iscte.pt
Tel: 00351217650459

Laura Conchinha

ISCTE-IUL, Instituto Universitário de Lisboa

ABSTRACT

Supply chain management and procurement policies can strongly influence the quality of service provided by companies, therefore its ability to compete in the market. Ten years after deregulation of the pharmaceutical market in Portugal, the industry faces strong challenges. Organized purchasing groups emerged to gain bargaining power towards suppliers. Nonetheless there are traditional players (pharmacies) who remain independent. The purpose of this paper is to assess and compare the perceived quality of the service provided by the traditional distributors with the one from the economic groups, and identify which factors need to be more developed by these groups to improve its service. Twenty pharmacies were interviewed (ten belonging to a specific economic group and ten independent ones). Findings show that the main criteria for supplier selection are the commercial conditions. Although the access to more favourable purchasing prices is the leading reason for pharmacies joining the economic group, lack of fulfilment of the overall commercial advantages announced by the economic groups (such as service consistency and price, when compared to the monthly fee payed to the group) lead some pharmacies to remain independent. Pharmacies manager's management skills were identified as an influencing factor when choosing to be part of the economic group.

Keywords: supply chain management; B2B; service quality; pharmaceutical industry; multiple case study comparison

INTRODUCTION

Portuguese pharmacies are facing a significant increase in competition as the market is no longer as regulated as before. Ten years ago the market became deregulated and many new players (drugstores) entered the market making available all products the traditional pharmacies offered under protection rules. Only the prescribed products remain regulated and available only at the traditional pharmacies.

The drugstores complemented their value proposal by adding complimentary services, such as beauty and nutrition services, among others, representing strong competition to the well-established pharmaceutical market. These new players pressured selling prices down and margins no longer support low rotation inventories or urgent deliveries (that sometimes were available up to 5 times a day) at small volume pharmacies.

One way the pharmaceutical industry found to fight this competitive battle and gain bargaining power towards its suppliers was to aggregate pharmacies in economic groups. These groups allow purchasing products at lower prices due to more bargaining power and aim for high quality in service delivery. At the same time some of these groups also provide management support for those who end up managing the pharmacies but have no management background.

The span of services available at the pharmacies is an important issue for the customers, as well as product availability and attentive care (Silva, 2015). These are some of the issues that influence end customers when deciding where to purchase. By

providing a service that matches retailer's expectations, suppliers can contribute to their development of competitive advantage (Mentzer et al., 2008).

Every pharmaceutical product is potentially available at any pharmacy so besides complimentary services what leads a customer to a specific pharmacy instead of another? Customer service is a strong driver and product availability is at its centre. At the same time investment in inventory is a major concern for the pharmacies as variety is wide and demand uncertainty high. Assuring immediate product availability is a major challenge for pharmacies and overcoming the lead-time gap (Christopher, 2016) is a permanent management issue. Purchasing costs are a major concern as well as on time deliveries, which are issues that pharmacies consider when deciding to join these economic groups or to keep purchasing from the traditional distributors. Under this context, the purpose of this paper is to perceive if there are differences in terms of the supply services provided by the economic groups to its joining pharmacies and the one provided by the traditional distributors/wholesalers, and identify if there are factors that these groups need to improve to make a better service available to the pharmacies. Therefore this research has two main objectives. The first one is to assess and compare the perceived quality of the service provided by the traditional supply chain agreements and the one made available by the economic groups. The second is to identify specific ways in which the economic groups can improve their service. Assessment will be based on the perspective of the customers of the economic groups, i.e., the pharmacies compared to perception of service received by pharmacies that maintain the traditional supply system.

In order to achieve its goal this research grounds its literature review on supply chain management and service quality. Two groups of 10 pharmacies each are compared, one belonging to a specific economic group e the other constituted out of independent pharmacies. Interviews were conducted with the managers of these pharmacies. Content analysis was used for the treatment and analysis of interviews.

LITERATURE REVIEW

It is customer service that more and more sets the difference between the offerings from different players in the same industry (Christopher, 2016). Product availability is one of the most relevant issues in customer service as, although slowly, markets are becoming less sensitive to product brand. This can easily lead to lost sales for the supplier but not exactly to the point of sales as substitute products might be available. Mentzer et al. (2008) posit that by supplying good logistics service companies can add value to the value proposition for the customer and therefore support its customer to sustain competitive advantage in their own market. According to the same authors, this competitive advantage can be achieved with product availability, on time delivery and error free orders. Being able to compete in the market is therefore a consequence of the level of customer value provided, which is heavily influenced by the suppliers' service quality.

Supplier selection if a source of competitive advantage as the player is only as strong as the supply chain it is part of. Strategic procurement can set the competitive scenario of a company when compared with others in the same industry (Simchi-Levi et al., 2008). Searching for the best supply is a dynamic process that impacts the quality of the service the companies provide to their own customers. Being able to develop bargaining power and reduce supplier dependency is a way to reduce procurement costs (Kraljic, 1983).

Procurement plays a major role in creating supply chain resilience (Pereira et al., 2014). In markets where product availability plays a key role in customer service, being able to assure the best suppliers is of paramount relevance. In parallel, being able to supply competitive and resilient service influence buyers to consider those suppliers during their sourcing exercises. Service consistency and short lead times are relevant procurement issues as the retail customer, specifically in the pharmacy's market, aims a very short order cycle (Christopher, 2016).

Based on the conceptual framework, the research question pursued in this research is:

- *In the retail pharmaceutical market, which issues are enhancing or preventing the retailers from joining economic groups and what are the issues these groups should focus on to enhance their service quality to become more attractive for pharmacies' sourcing strategies?*

METHODOLOGY AND METHOD

Research focusses com a single economic group. Pharmacies that are part of this group are compared with a group of similar dimension of independent pharmacies.

The data collecting tool was interview. There were two frames for the interviews, one for the pharmacies that belong to the economic group and one for the pharmacies that do not. The structure of the interview used for the pharmacies that are independent is composed out of three parts: the first one focussed on the pharmacy, its supply and the satisfaction level with the service provided by the suppliers; the second part aimed at topics concerning the reasons that lead the pharmacy not to join any economic group; lastly, a set of topics concerning the quality of the logistic service provided by the pharmacy to its customers. The structure used for the pharmacies that belong to the economic group was also composed out of three parts: the first one focusses on the reasons for joining the economic group; the second part aimed at the satisfaction level with the logistic service and support received from the economic group; the last part aimed at the logistic service provided by the wholesalers the economic group has agreements with its own customers (the joining pharmacies). Wording was adjusted during the interviews to assure interviewee understanding of the topics.

Twenty pharmacies were selected for this research. Out of the 20 selected pharmacies, 10 are part of the economic group and 10 are independent. In order to add variability of context to the research, pharmacies were selected from different districts of Portugal: 12 from Lisbon, 2 from Setúbal, 2 from Évora and 4 from Portalegre.

Interviews were performed with the owner of the pharmacy (which in some cases is also the technical director). Each interview lasted for about 15 to 30 minutes. There were 18 face to face interviews and two interviews performed over the phone.

Interviews were written down and then key words (or its synonymous) were searched for. Data analysis followed Krippendorff (2013)'s recommendation for content analysis.

STRUCTURE OF SUPPLY OF PHARMACEUTICAL PRODUCTS

Portuguese pharmacies can purchase directly from the laboratories or through wholesalers. The laboratories are the producers of the medicines or of other products. The wholesalers purchase from different producers/brands and then supply the pharmacies with a wider range of products.

Globally, all pharmacies have (more or less formal) agreements with the wholesalers from which they receive products on a daily basis. If the wholesaler does not have the product available or in order to use eventual commercial campaigns the pharmacy can purchase directly from the lab. Nonetheless, some pharmacies chose to purchase only from the wholesalers.

The wholesalers' service level depends on the commercial conditions agreed with the pharmacy (service, volume, selling price, number of daily deliveries). Lead times are usually short, of 12 hours up to one day.

The Portuguese pharmaceutical market is strongly regulated and selling prices for medicines are defined by a public institute. These prices are considered low for the labs and wholesalers. These wholesalers can also distribute products to other markets, less regulated or with higher selling prices and it is not unusual that stock outs occur in the Portuguese market because the products were sent to more profitable markets. Pharmacies that are part of the researched economic group have access to a purchasing office for all purchases and services. For confidentiality reasons this group is not identified, and will from this point forward be called Group X. Using this Group X the pharmacies have access to lower purchasing prices, which were previously negotiated between the group and the supplier (lab or other supplier). The purchasing price is always an advantage but the service level depends on commercial conditions

negotiated by Group X with the wholesaler. Group X developed commercial agreements with three wholesalers. These wholesalers are not exclusive to Group X. Pharmacies who purchase under the scope of Group X order directly from these wholesalers.

Being born in 2008, by the beginning of May 2017 Group X represented 401 pharmacies. Besides a purchasing centre, Group X provides marketing, financial and human resources management support to their associates, as well as training and in store organization. There are also available specific shared services (such as nutrition) that otherwise the pharmacies would not have enough volume to support. Once part of Group X the pharmacies receive a total makeover of the facilities to assure similar commercial image at all pharmacies in the group. In exchange to the package of services pharmacies pay a monthly fee plus a per cent over their sales.

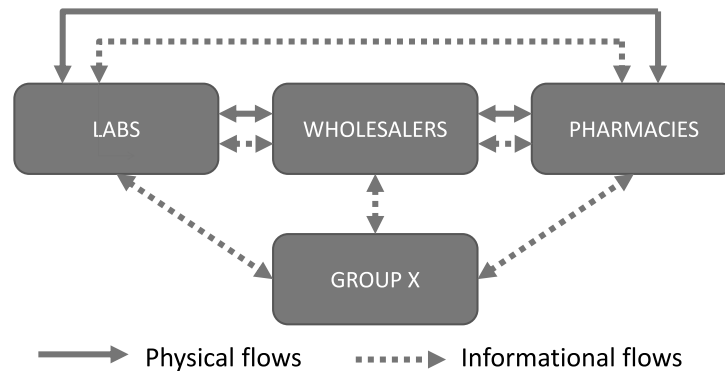


Figure 1 – Physical and informational flows in the supply chain of Group X

Figure 1 shows the physical and the informational flows between the pharmacies that belong to Group X and the players in the supply chain.

There is always a direct and an inverse flow between every entity as returns can occur (due to expiry dates or service issues). Group X works as a purchasing office and does not hold inventory. It also works as an advisory player for management purposes and planner of additional services. The independent pharmacies (that do not belong to Group X) are linked both to the wholesales and the labs as they are not limited to purchase from the wholesalers.

FINDINGS

When analysing the criteria used by the pharmacies to select their suppliers, findings showed that it is mostly based on commercial conditions offered and product availability. Table 1 shows the main results.

Table 1 – Criteria considered when selecting suppliers

Criteria	Relative per cent (1)
Payment conditions and lead time	100%
Product price	50% (2)
Product availability	50%
Delivery time range and availability during weekends	20%

(1) Out of the 20 interviewed pharmacies

(2) All the pharmacies belonging to Group X (100%)

All the pharmacies belonging to Group X mentioned that they prefer to use the wholesalers with which Group X has agreement. Nonetheless, only 20% of them purchase exclusively from such wholesalers (these pharmacies are owned directly by Group X), when 80% of them state that they preferentially buy from these wholesalers but keep contacts with other wholesalers or labs to complement their offer, to assure supply (not always the wholesalers that have agreements with Group X have product

availability either because Group X missed placing the order or the product is out of stock). Taking advantage of specific campaigns was a criteria mentioned by all the pharmacies that are not part of Group X to purchase specifically from the labs.

In terms of satisfaction with the service provided by their suppliers, Table 2 shows the distribution of answers on a scale from 1 to 1. None of the sampled pharmacies is completely satisfied with the service received from its suppliers but at the same time there are no observations bellow the middle point of the scale, which allows concluding that there are no situations of dissatisfaction. The median satisfaction level is 5, which allows concluding there is room for improvement in terms of the service provided by the pharmacies.

Table 2 – Satisfaction with suppliers' service

Value of scale	1	2	3	4	5	6	7
Per cent	0%	0%	0%	20%	45%	35%	0%

(Legend: 1 – Not satisfied at all; 7 – Completely satisfied)

Table 3 allows comparing the satisfaction of the pharmacies supplied under the scope of Group X and the independent ones. Although the satisfaction level is similar in both groups, there is stronger agreement between the independent pharmacies. Pharmacies supplied under the scope of Group X complain mainly of the lack of ability of the wholesalers to deal with such high level of demand and the stock outs. The wider variability of responses from Group X's pharmacies can also be justified due to the fact that two of these are actually owned by the Group, situation that might prevent those two managers from exposing the real satisfaction level with the wholesalers.

Table 3 – Comparison of satisfaction between groups of pharmacies (supply)

	Global satisfaction	Pharmacies supplied under the scope of Group X	Independent pharmacies
Median	5	5	5
Interquartile interval	1	2	1

Both groups mention lack of product availability as the main reason for their lack of satisfaction. Smaller pharmacies are additionally concerned about this issue as when products are rationed they are usually penalized receiving even less quantity. As for the wholesalers suppling at the prices negotiated by Group X, it is often that they channel their product availability to more profitable customers than to Group X's. Nonetheless, when comparing the two distributions the Mann-Whitney test revealed that the difference is not statistically relevant ($p=0,392$).

Pharmacies in Group X were asked about the reasons for joining the Group. As 2 of them are owned by the Group, only 8 pharmacies were questioned about this topic. Table 4 shows the relative frequency of answers. Pharmacies could identify more than one reason for joining the Group.

Table 4 – Reasons for joining Group X

Reasons for joining	Relative per cent
Access to more favourable prices	63%
Offer of specialized services	50%
Recognition of Group X as having a new strategic model	38%
Need to adapt to the new legal conditions	25%
Differentiation of final service	13%
Improved competences to serve customers	13%

Although financial issues are the main reason for joining Group X, pharmacies also pointed the additional services made available by Group X as a selling issue. Nonetheless, although more affordable prices is the key issue, it has been identified as a selling point Group X cannot fulfil. In fact, this is only a theoretical advantage as it was recognised by these pharmacies that product availability is poor at the selected wholesalers. This is also a reason for these pharmacies to maintain agreements with other wholesalers beyond the selected three.

As for the currently independent pharmacies, Table 5 shows the reasons stated for not joining any economic group.

Table 5 – Reasons for not joining any economic group

Reasons for not joining	Relative per cent
It has not yet been considered	30%
Commercial advantages presented do not compensate	30%
Want to keep their independence	20%
No group has yet showed enough advantages	20%

Findings show that the financial advantages were not enough to capture the attention of these pharmacies. The more modern looking ones do not recognise the need for the support of one of these groups, which leads to conclude that the physical support at the point of sales could be also considered a good value proposition from Group X.

In most cases the technical director of the pharmacy is also the owner, which means that that person has to divide its attention between the technical support to the customers and the management of the business. In one specific case the technical director is fully dedicated to the management of the business and stated that he can achieve as good financial deals as the ones offered by the groups, but that it only happens as a consequence of his time investment in procurement.

When questioned about the quality of the services offered to its own customers, findings showed that the pharmacies recognise that there is scope for improvement. Table 6 shows the results obtained. Although no pharmacy scored below the middle point of the scale, only 10% are fully satisfied with the service provided and the median is at 5 out of a scale of 7 points.

When results from the satisfaction with the service provided (Table 6) are compared with the satisfaction level with the suppliers (Table 2), it can be stated that pharmacies are more pleased with their own service than with the service received from its suppliers.

Table 6 - Satisfaction with its own customer service

Value of scale	1	2	3	4	5	6	7
Per cent	0%	0%	0%	0%	55%	35%	10%

(Legend: 1 – Not satisfied at all; 7 – Completely satisfied)

Comparing the two groups of pharmacies (independent ones vs belonging to Group X), although the satisfaction level with the service provided is higher at pharmacies belonging to Group X than at independent pharmacies, the spread of responses is also higher (Table 7). As 20% of the pharmacies from Group X are owned by the Group, it is possible that it might be influencing the responses.

Table 7 – Comparison of satisfaction between groups of pharmacies (service provided)

	Global satisfaction	Pharmacies belonging to Group X	Independent pharmacies
Median	5	6	5
Interquartile interval	1	1	0

DISCUSSION

Group X assortment is limited, which leads some pharmacies to keep supply agreements with additional suppliers to complement the range of their offer. These parallel agreements also allow taking advantage from campaigns offered by other wholesales or even the labs.

Although lead time was a criterion identified by all pharmacies as a very relevant one to be part of the Group, 8 out of the 10 pharmacies that belong to Group X keep agreements with other suppliers and product availability is one of the reasons. This leads to conclude that although Group X announces a specific lead time, the wholesalers they have agreements with do not fulfil it. The price of the products and product availability were reasons identified by all the pharmacies belonging to Group X for joining the Group. As product availability is not assured at the agreed price, it is possible to conclude that the Group is not providing the main advantages recognised by the pharmacies, forcing these to keep agreements with other wholesalers and endangering the willingness of the pharmacies to keep being part of the Group.

Although the access to more favourable purchasing prices is the leading reason for pharmacies joining Group X, fulfilment of commercial advantages is not recognised latter on (such as service consistency and price, when compared to the monthly fee paid to the group) and lead some pharmacies to keep managing purchasing relations by themselves (being independent from any group).

Pharmacies belonging to Group X show a higher satisfaction level with the quality of the service they provide. In fact, one of the main alterations a pharmacy received when joining the group is the complete alteration of the physical appearance of the space (more modern), customer service training is provided to the store's employees and complimentary services become available for their customers, which influences the satisfaction level they have with the quality of the service they provide. Nonetheless, product availability is a major concern for pharmacies belonging to Group X, which can reduce their satisfaction level with the service provided.

Based on the results obtained, even considering that the sample is not representative of the industry, it is possible to posit that Group X is experiencing some problems in fulfilling the promises it makes to the pharmacies of the Group, especially in terms of product availability at the more favourable prices. Nonetheless, widening the services made available at the pharmacies and the new visual appearance of the spaces are topics well perceived by the pharmacies. As the commercial conditions are a key issue for joining Group X, the Group should adjust its procurement strategies to meet the expectations of its customers (either by developing more bargaining power towards wholesalers to assure supply, or run its own distribution centre to be able to fulfil orders from the pharmacies that join in – both in terms of volume and in terms of lead time fulfilment).

CONCLUSIONS

This research aimed at assessing and comparing the quality of the service provided by the traditional distribution system of pharmaceutical products in Portugal and the one made available by the economic groups that emerged when the industry became less regulated. The assessment was put to practice from the perspective of the pharmacies.

Findings lead to conclude that when managers of pharmacies have more time to dedicate to procurement issues it is possible to achieve better quality of supply (price, lead time consistency and product availability) than the service provided by the wholesales with agreements with the economic group analysed. These issues are the more relevant ones for the pharmacies when assessing their suppliers but the pharmacies of the analysed group need to keep parallel suppliers to achieve the service supply their desire. Product availability issues should be the main focus of the group if it wants to improve the quality of the service provided. Nonetheless the Group is well recognised for the range of complementary services made available for its pharmacies and the marketing support they provide.

A single economic group as analysed and the sample used was limited (only 20 pharmacies). It would be interesting to expand this research to more pharmacies of the same group. In the same line of research, it would be interesting to compare the difficulties of supply of this Group with other economic groups. As the quality of the service provided is better assessed by its customers, further research should be performed to assess if the quality of supply influences customers' perceived quality of the service provided at the pharmacies.

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