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INTERNET AND AFTER-SALE SUPPORT: THE CURRENT SITUATION AND PERSPECTIVES FOR BRAZILIAN MANUFACTURERS [1]

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INTERNET AND AFTER-SALE SUPPORT: THE CURRENT SITUATION AND PERSPECTIVES FOR BRAZILIAN MANUFACTURERS

ABSTRACT: The Internet allows for the provision of additional and purchase reinforcing services to customers. New communication channels can be developed to improve the interaction among manufacturers, their direct customers and even the consumer of final goods, who may be several links down the value chain. For companies that develop the required infrastructure and change their processes to take advantage of the new technology, possible rewards are the increase in current customers' loyalty and the attraction of new customers, impressed with the additional value that is generated.

This paper presents the results of a survey involving 655 manufacturers from the state of Sao Paulo (Brazil), with questions about the use they make of the Internet for after-sale purposes. The authors analyze the impact of the Internet on the companies' after-sale activities and make considerations about future changes the participants anticipate, considering the potential benefits of the new technology.

KEY WORDS: Internet, after-sales, customer service, survey, manufacturing industry.

INTRODUCTION

When creating a web site, in a stage when they still don't know exactly how to benefit from the Internet's full potential, companies use it primarily to promote their institutional images and to present their products and services. During such early stage, web sites work more as "windows" than as "cashiers". Gascoyne and Ozcubukcu (*apud* SACCOL, 2003) remind us that many companies build their Internet presence without developing a clear vision of what they intend to do with the new technologies and without reflecting about how their processes and businesses can (or should) benefit from them. Brown (2003) also alerts us that companies' web sites don't make sense, from the perspective of supporting income generating transactions, if they overemphasize the presentation of institutional data and advertisement of products and services. According to that author, the companies need to reflect about efficient ways of integrating the entire Web's potential to their processes and business practices.

The research project that originated the data that were analyzed in this paper was developed with the purpose of providing a better understanding of the way Brazilian industrial companies use the Internet to support their strategies and business practices. An electronic survey was sent to all industrial companies contained in a database of FIESP, the organization that congregates manufacturers in the state of Sao Paulo, the most industrialized region of Brazil. All companies in that database that had a valid e-mail address were sent a message with the invitation to participate in the survey. 655 usable responses were obtained, which represent about 8% of the population.

This paper, specifically, focuses on the evaluation of the responses that were provided by the participants, related to the current use of the Internet or the intention of future use, in order to improve after-sales activities and the retention of customers.

METHODOLOGICAL APPROACH

The structured questions used in the questionnaire followed a Likert scale. Respondents could choose one of the possible graded answers from a drop-down menu, which made selection easy, increasing the speed of filling in the form. The authors wanted the questionnaire to be simple enough to be filled-in at the time the respondents were checking their e-mail. If it were left to be answered at a later time, the authors believed chances of obtaining an answer would dramatically decrease.

The questionnaire was pre-tested, with respect to the content, having been presented to a group of executives working in the field, who conveniently happened to be taking a course where the authors were instructors. They gave important contributions in order to make the questions more accessible and understandable to the "actual" participants in a later stage. With respect to the format, the authors randomly separated one per cent of the whole database and sent the questionnaire to those companies a month in advance. No changes in format were found necessary, after the pre-test answers arrived and, by the time the larger group of companies was invited to participate in the survey, the researchers already had a

reasonable idea of the return rate that could be achieved, based on the return rate of the pre-test sample.

Respondents belonged to a convenience sample formed by those companies that answered the questionnaire. Demographic data of the companies comprising the convenience sample were roughly compared to data for the population of manufacturing companies contained in FIESP's database, as a whole. The authors have no reasons to believe that the sample they obtained is not representative of the population.

POSSIBLE USES OF THE INTERNET IN PROVIDING
AFTER-SALES SUPPORT AND SERVICE

The Internet has become an important sales tool, which is no news, anymore. But it also has the potential of helping companies to achieve better performance in other activities related to their businesses. After-sales and support activities may migrate, at least partially, to the Internet, providing fast and easy access to information and, consequently, a higher level of customer satisfaction. Figallo (1998) believes that the Web is able to replace the services of call-centers and paper manuals by a personalized and updated on-line information service. "This will help companies save money and, at the same time, provide a better quality service" (p. 363).

Graeml and Csillag (2003) surveyed software developing companies from California about the use they made of their web-sites. They found out that 60% of the participants believed that the area that needed most urgent change in their web-sites was the after-sales support. The respondents would like to do much more than they already do, using the Internet. They would like to act directly on their customers' computers, in order to update software versions or correct eventual problems.

Software companies may get to the extreme situation of offering all after-sales support through the Web. Companies working with more tangible products may not be able to virtualize the whole after-sales service, but just the fact of starting the support using the Internet may already represent a large step towards getting closer to the customer, even when the next steps of the service can't be performed in a virtual way.

We will now describe a few after-sales services that can be reformulated, in many cases, in order to benefit from the use of the Internet:

On-line maintenance

Electronic devices can be connected to the computer and, thus, to the manufacturer's web-site, in order to be submitted to a test procedure capable of detecting problems and recommending possible solutions or the replacement of parts, maybe by the user him/herself, if the product was designed for that.

In other cases, it is (or will be) possible for the manufacturer to act directly on the product, restoring it to its perfect working condition, without the need of a repair person being sent to where the equipment is, neither its transportation to a repair office. This has already become particularly simple in the case of reinstalling software, for example, or correcting software bugs, as noted by Graeml and Csillag (2003). However, within the next few years, it will become increasingly more common in automobile check-ups and the repair of home appliances. Such devices will just have to be plugged to a computer to be diagnosed and fixed, from the distance.

Provision of new versions or upgrades of products on-line

Following the same reasoning that was developed for the case of on-line maintenance, it is also possible to use the company's web-site to provide new versions of programs, to be incorporated to existing hardware. That allows for the easy distribution of patches created to solve programming bugs detected after the product was released or just to allow the improvement of its functionality.

Considering that physical products such as TV sets, refrigerators, microwave ovens, but also elevators, industrial machinery and vehicles rely on microprocessors and other electronic devices to work, which are controlled by software, it isn't hard to think that all those products could, potentially, be updated by means of an Internet connection, to download upgrades.

On-line follow-up of the status of an order

The company's web-site may be used to provide information to the customer about the status of an order. Package delivery businesses have been doing so for quite a while now, because they've found out that such information is considered as an additional (important) feature of their service. Customers feel safer if they know exactly where their goods are at any time. They can even plan better other activities that rely on the arrival of the order, something that has become essential to those working under the just-in-time philosophy.

That kind of service can be offered in the most different areas, substantially increasing the customers' satisfaction and reducing the need of additional phone or presential interaction with the supplier to get information about the status of the order.

Creation of a two-way communication channel with the customer for after-sales support

The same way the customer needs to interact with the supplier to buy a product or service, in many cases, it is also necessary to keep in touch after the purchase, in order to clear doubts, complain about something, give suggestions or for other reasons.

One should not underestimate the importance of the development of such channel, because, if it doesn't take place, the customer may feel abandoned (everyone seemed to be there at his/her disposal to carry out the sale, but nobody is available to provide service after business is done and payment has already been cashed in).

The Internet is a particularly useful and cheap tool to be used as the means for such contact with the customers after the purchase. It can either be used as a complement to more traditional means, such as the telephone or the mail, or as a replacement to them.

Provision of FAQ (*frequently asked questions*) web-pages for after-sales support

A section can be developed in the company's web-site with information to help the customer solve simple questions regarding the product or service of the company, without any need of a human contact with someone from the organization. Such page may contain:

- troubleshooting information to help the customer solve problems or mal-functioning on his/her own;
- addresses of repair offices where the product can be serviced if troubleshooting procedures aren't enough;
- links to web-pages containing updates or new versions of the product, with improved functionality;
- hints that can lead to better performance;
- information on alternative uses for the product;
- instructions about product warranty and the proper way to claim it; etc.

The same way a FAQ section is useful to clear customer doubts prior to the purchase, it is also important to help solving problems afterwards, so that the customer doesn't feel abandoned and gets diligent response from the supplier. It is an important mean to decongest the other communication channels between the organization and its customers.

PRESENTATION OF THE RESULTS OF THE SURVEY

Many of the participating companies, apparently, are still in the stage of overemphasizing the use of the web-site to promote the company, itself, or its products, giving little notice to the possibility of supporting income generating transactions, as recommended by Brown (2003). More than 80% of the participants say that their companies use the web-site to promote the company's image and to advertise products. The use of the site for after-sales activities and for the achievement of customer feedback was much less emphasized. And there was still a significant difference in patterns of behavior, depending on the size of the company: 54.5% of large companies said that they use the web-site to carry out after-sales activities and 72.7% of them claimed to use the web to achieve feedback from their customers. Among mid-sized companies, those percentages were 28.5% and 41.1%, respectively and, among the small companies, 21.1% and 30.9%.

Although Vidal (2003) had already detected an increase trend in the use of the web-site to provide customer support, by manufacturing companies in Sao Paulo, the authors of this paper have found that it is still possible to go much beyond, considering that providing better (and more) service to the customers may represent a powerful weapon to differentiate the company's product.

The following paragraphs will present some results of the survey that was carried out with manufacturers from the state of Sao Paulo, in Brazil, which the authors believe that will lead to a better understanding of the use industrial companies make of the Internet, in that country.

After-sales support to customers

Among large companies, 59.1% consider that the Internet's impact on their after-sales activities was at least moderate, during the last three years. For mid-size companies, that percentage was 38.2% and for the small ones, 31.6%. Only 4.5% of large companies consider that the new technology doesn't apply to their after-sales activities, an opinion they share with 8.3% of the mid-size companies and 8.8% of the small (see **Figure 1**).
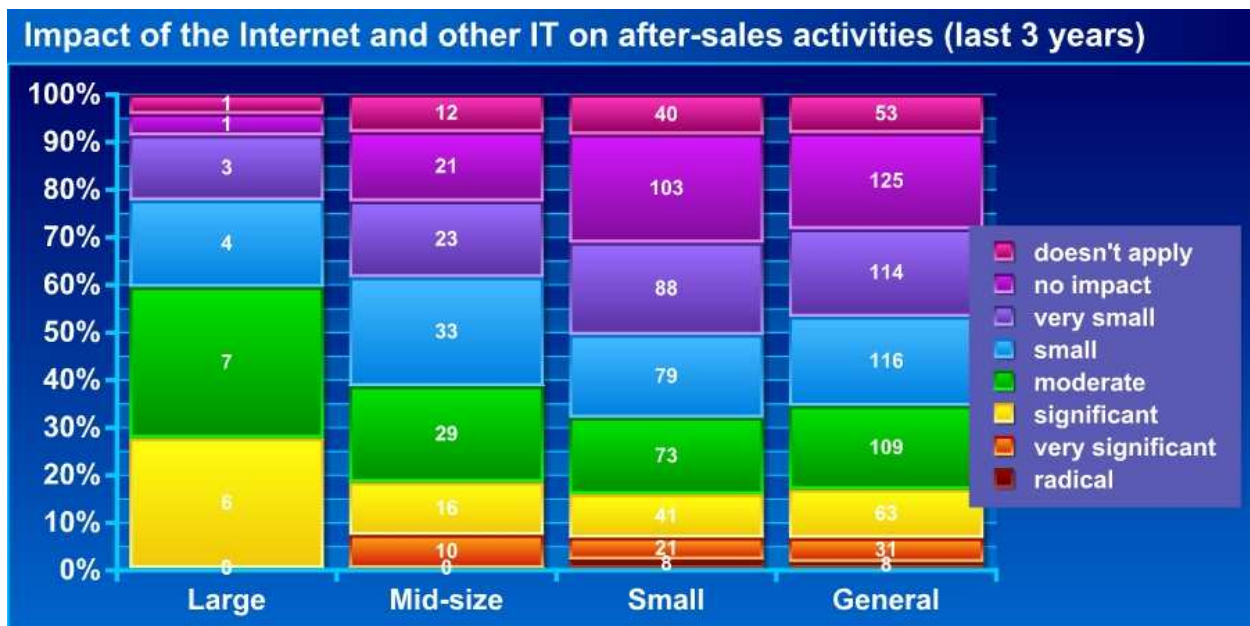

Figure 1   Impacts of the Internet and other IT on after-sales activities, during the last 3 years, depending on the size of the company

Note: in the figure above, as well as in the other figures presented in this paper, companies with more than 500 employees were considered large, companies with more than 100 employees were considered mid-size companies and those with less than 100 employees were considered small. The numbers presented inside each of the rectangles that comprise the bars indicate the absolute number of companies of that size that provided a specific answer to the question.

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It was observed that the use of the Internet for after-sales activities was more intense than for pre-sales activities. The correlation between the use of the Internet for pre-sales and after-sales activities was relatively high (0.604), which indicates that the companies that use the Internet for one purpose usually also use it for the other purpose.

Achievement of customers' feedback

The impact of the Internet and other IT on the way companies obtain feed-back from their customers was highly correlated to the impact on after-sales activities, mentioned in previous item. Pearson's correlation was 0.721, one of the highest among the correlations between variables contained in the study.

For 59.1% of the large companies, the impact of the Internet on the way they obtain feed-back from their customers was at least moderate, during the last 3 years. Among the mid-size and small companies, 44.4% and 32.8%, respectively, have the same opinion. Only 4.5% of the large companies, 6.3% of the mid-size ones and 8.9% of the small believe that the Internet doesn't affect the way they obtain feed-back (See Figure 2).
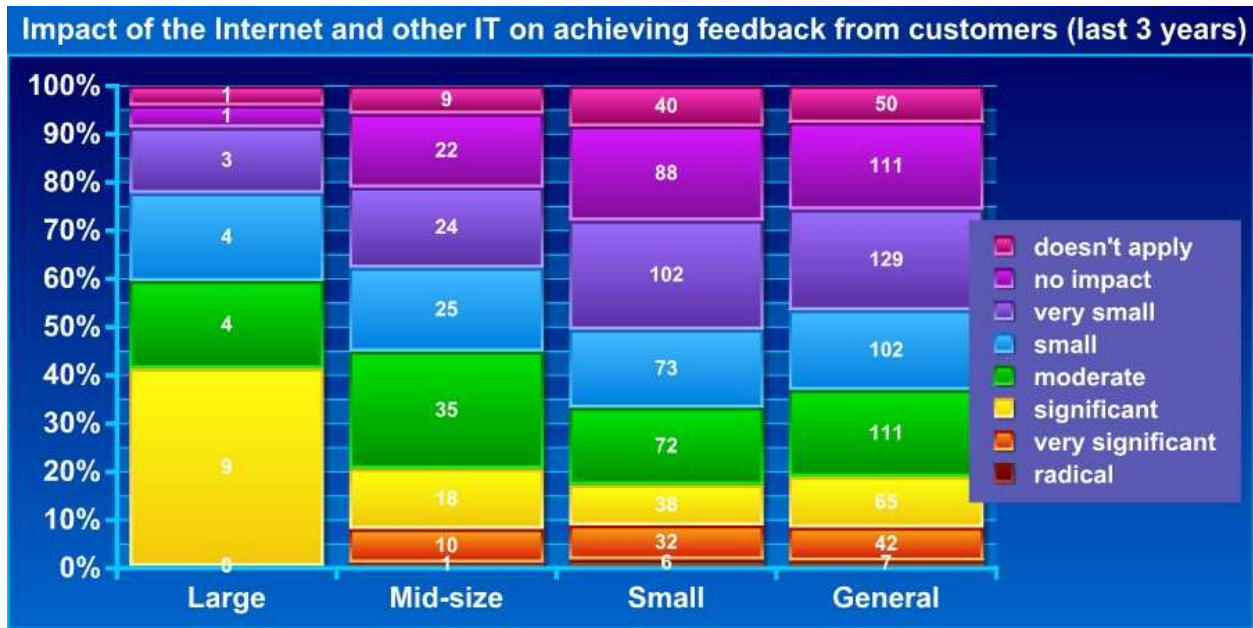
Figure 2   Impact of the Internet and other IT on achieving feed-back from customers, during the last 3 years, depending on the size of the company

Development of virtual communities of customers

The interest on the development of virtual communities of customers, according to the results of the survey, was low. Only 10.0% of the large companies, 4.0% of the mid-size ones and 3.4% of the small said that they stimulate the formation of virtual communities of customers, at least to a moderate extent. Other 25.0% of the large companies, 18.5% of the mid-size ones and 21.8% of the small intend to do something in that respect within the next 3 years. However, the percentage of companies that do not consider the issue important to their businesses is high, particularly among the mid-size and small companies: 73.4% and 67.9%, respectively. Among the large companies, that percentage is lower (35%), although still high. See Figure 3.
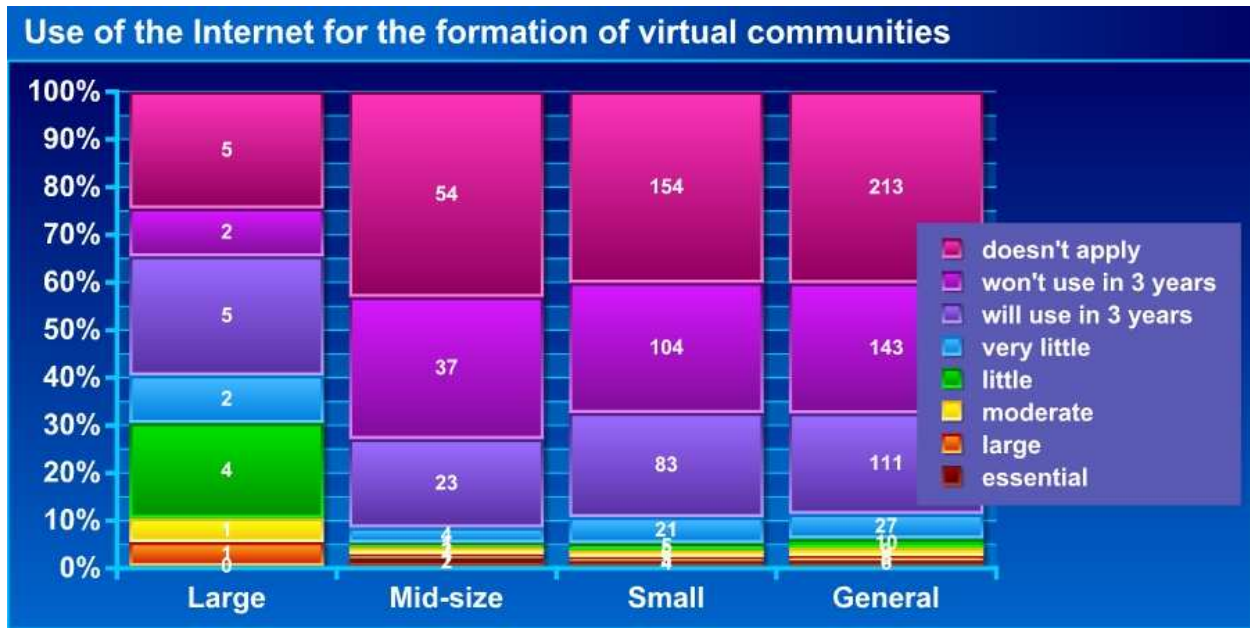
Figure 3   Use of the Internet to stimulate the formation of virtual communities of customers or users of the company's products, depending on the size of the company

Development of "virtual intimacy" with the customer

For 22.2% of the large companies, the use of the Internet and other IT to establish "virtual intimacy" with the customer is at least moderate. That is something that only happens to 5.6% of the mid-size companies and 8.2% of the small. Other 44.4% of the large companies intend to start using the Internet for that purpose within the next 3 years, the same happening with 37.1% of the mid-size companies and 33.3% of the small ones. However, 22.2% of the large companies, as well as 44.4% of the mid-size ones and 46.4% of the small say that they don't intend to do anything about this within the next 3 years, or they didn't consider the issue relevant to their businesses, as can be seen on **Figure 4**.
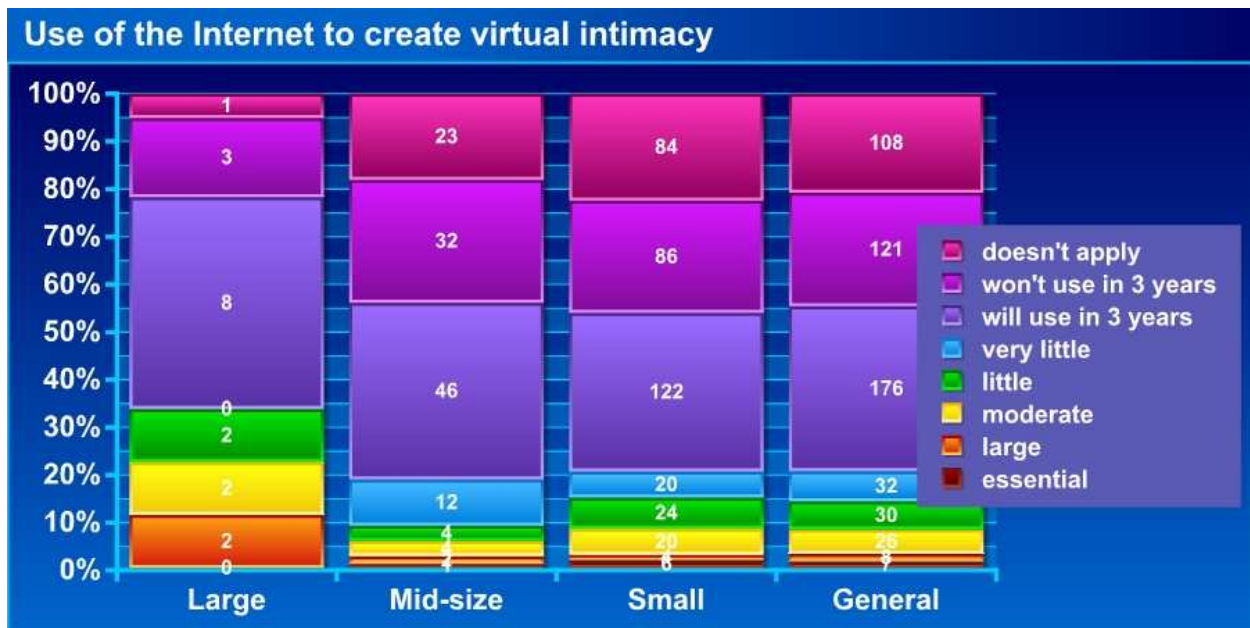
Figure 4   Use of the Internet to create "virtual intimacy" with the customer, depending on the size of the company

Customer relationship management

Among the large companies, 18.2% stated that they use CRM systems (at least) to a moderate extent. The same happens to 11.2% of the mid-size companies and 11.6% of the small ones. Half of the large companies, 47.8% of the mid-size ones and 38.3% of the small intend to start using the technology within the next 3 years. Only 9.1% of the large companies do not intend to develop CRM initiatives in the early future (next 3 years). For the mid-size and small companies, the percentage of those who don't intend to do anything about CRM within the next 3 years is higher: 26.1% and 38.6%, respectively. **Figure 5**, that follows, presents those results, confirming the fact that CRM is a buzz word, for the moment.
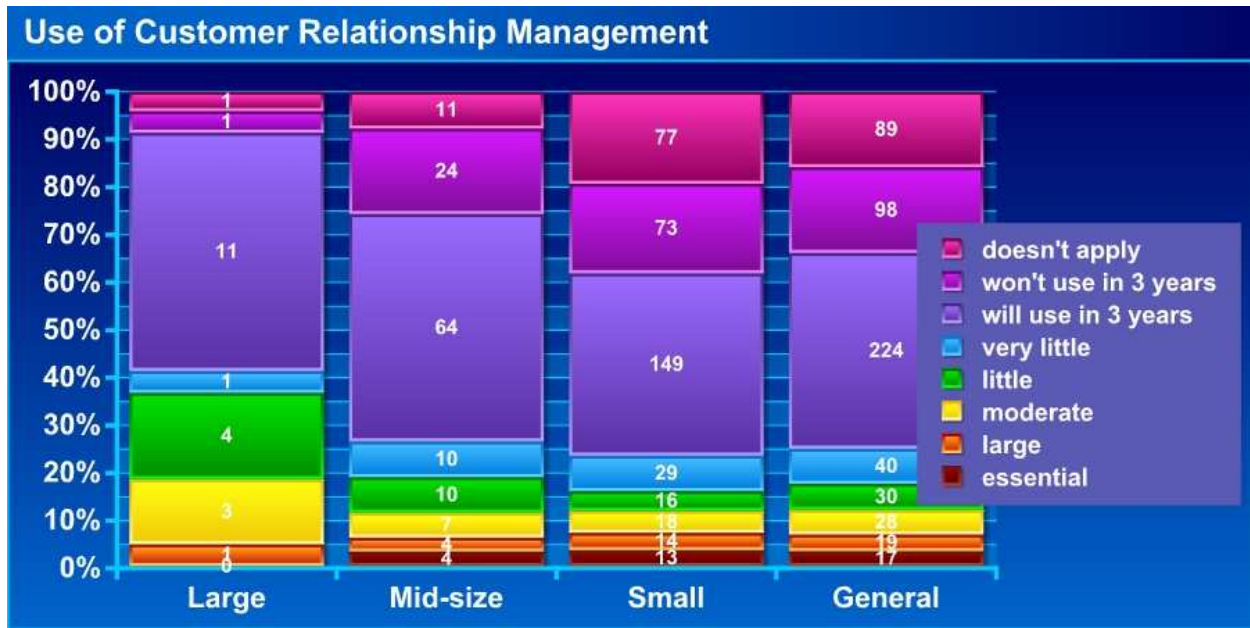
Use of Customer Relationship Management

Figure 5   Use of customer relationship management, depending on the size of the company

Loyalty programs

Current use of loyalty programs by the manufacturers has shown to be insignificant. In addition to that, the majority of the participants in the survey do not intend to include them in their marketing strategy. Among the large companies, 55.6% say that they are not going to invest time and money on loyalty programs within the next 3 years. The same happens with 74.0% of the mid-size companies and 71.3% of the small ones. Many manufacturers consider that loyalty programs are not compatible with their businesses. It will be interesting to follow up the evolution of this scenario. As the Internet allows for all transaction details to be recorded without much additional effort, it makes it feasible for the organizations to collect and analyze data required for the provision of that kind of incentive, which may contribute to

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a greater use in the future. About 20% of the surveyed companies claim they will start using fidelity programs within the next 3 years, according to **Figure 6**.
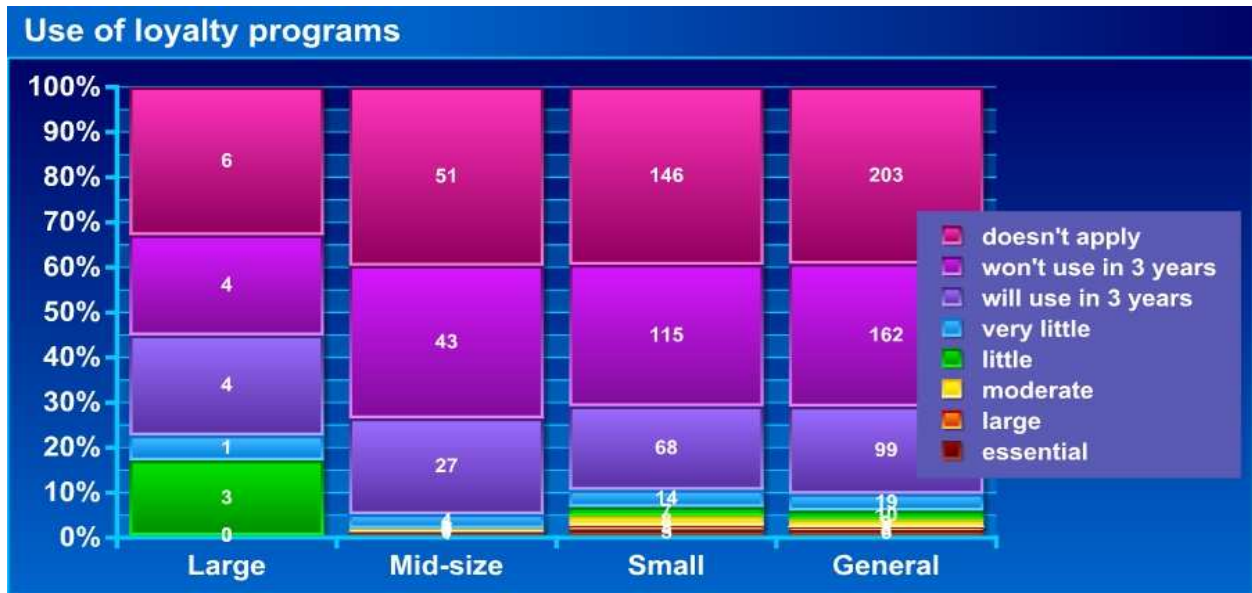

Figure 6   Use of loyalty programs, depending on the size of the company

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

When the authors analyzed the relationship among the several variables contained in the study, it was noticed that the impact of the Internet on the way participants take orders from their customers is correlated with its impact on after-sales activities, with a Pearson correlation index of 0.515. That means that the companies that are using the Internet to trade their products do not restrict themselves to selling through the Web, they are also using the new media as a platform to solve eventual after-sales problems, to provide additional information on the functionality of their products and to increase customers' loyalty.

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However, companies still tend to use the Internet and the new communication channels it makes available to its users following the rules and procedures that were successful in other media and which are not the most suitable for the new environment. That is understandable. Other huge transformations in the corporate environment had their initial impact delayed (or minimized) until they could be better understood and assimilated. It is essential that the new technologies start being seen not just as a new way of doing the same old things.

The use of information systems allows companies to store huge amounts of information about each one of their customers, which can be used to provide them with services that are better suited to their particular needs. The Internet, on its turn, may work as the interface between the customers and the companies' databases. By means of this electronic interface, the result of the interaction of the customer with the system can be automatically registered, eliminating the need of any additional procedure by the organization to feed the customers' information into the databases. It is, therefore, possible to reduce transaction costs at the same time the company offers a personalized service, with improved quality. If the information that is gathered directly from the customers is properly used to manage the company's relationship to them, company and customer may reach something that has been called "virtual intimacy", a level of awareness of customer needs that leads to the best results in terms of providing a perfectly suiting product or service, first, and the most diligent and efficient service, afterwards.

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