

AUTOMATION IN PURCHASING PROCESSES AND CUSTOMER REFLECTION

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Abstract: Automation of the sales process, cyber-shopping – these are the key sales trends of the modern market. The broadly understood notion of digitization has fundamentally changed the purchasing process. This is confirmed by investments in this area of such companies as Shell, Circle-K, Johnson & Johnson, British Airways, McDonald and others. Full automation of the purchasing process allows the company to reduce costs and better manage employee time. The purpose of the article is to present selected innovative solutions in the field of sales process automation and analyze the expressed opinions of customers in Poznań on the use of modern sales process solutions.

Keywords: Innovations, customer service, management, automation.

1. Introduction

Automation of the sales process, cyber-shopping – these are the key sales trends of the modern market. In today's world, the broadly understood concept of digitization has fundamentally changed the purchasing process. This opinion is confirmed by investments in this area of such companies as Shell, Circle-K, Johnson & Johnson, British Airways McDonald and others. Full automation of the purchasing process allows a company to reduce costs and better manage employee activity. According to last year's survey of the British consulting company Hackett Group, 84% of all listed purchasing organizations in the world believe that in the coming years, the broadly understood notion of digitization will fundamentally change the purchasing process. At the same time, only 25% of the companies that responded said that they had the resources, competences and strategy for the digitization of purchases. In the face of such a vision of customer/company interaction, companies dealing with retail sales somehow are forced to implement customer centric strategies, placing the customer in the center of their attention, and thus increasing the importance of customer service (Maciejewski, 2012,

p. 37-44). Without understanding these trends, enterprises will find it difficult to compete in the market in the near future.

2. Technological innovations and readiness of customers in Poland

Automation is "the use of devices to collect and process information that takes over certain human-related cognitive, intellectual and decision-making activities, performed so far during the use of the object (machine, plane, bank) or during creative work (design, construction, learning)" (Encyklopedia, 2019). In recent years, we have been observing more and more automated solutions in stores proffering Fast Moving Consumer Goods (FMCGs). Among others, these are: self-service checkouts, mobile scanners, independent self-service outlets, or world-tested solutions for automated scanning and paying for purchases. Herein, "experts predict that customer service of a trading company will be based primarily on its individualization and the use of innovative, modern technological solutions" (Maciejewski, 2016, p. 194) (Table 1).

Table 1.

Changes in the customer service of the trading company in the perspective of 2020 (N = 19)

Type	Number of indications
Innovative technological solutions in communication with clients (mobile devices, application applications, service visualizations, virtual hostesses)	9
Individualization of the service method	7
The use of new merchandising techniques (visual marketing, digital marketing, aroma-marketing, audio-marketing)	5
Reduction of the importance of human services for automated service	4
Customer-friendly methods of payment and placing orders	2
The development of additional services that facilitate the purchase	1
Increased involvement of sales staff in the service process	1
Personalization of marketing communication	5

As research shows, Poles are very eager to learn about and apply new technologies. This can be seen in the example of contactless payments, which in 2019, will be accepted in 100% of all the payment terminals in Poland (Mastercard research, 2019). This is the highest ratio in the world, but should not come as a surprise, because, for many years, Poles have been in the forefront of the adaptation of new technologies in the payments market. Retail sales automation solutions are not just technologies used by target customers. They are also a series of systems that facilitate the everyday work of most stores. These are computer programs for enterprises that enable real-world preview of the condition of goods in the warehouse, delivery of products to sales points, and the viewing of settlements with contractors, while facilitating inventories, and automatically printing and assigning labels. Although these activities seem relatively simple and manageable on a small scale, considering the size of individual retail chains, their development would not be as dynamic without the use of specialist software to

optimize the work of retail stores. Based on the research carried out by Mastercard in 2017, it is clear that Polish customers are open to new solutions in the FMCG sales sector. Indeed, over 51% of all respondents expressed interest in self-scanning of products. Moreover, 71% of all respondents expressed frustration in waiting for their turn at the checkout during their daily purchases, mainly due to the loss of time. Research shows that the average queuing time in a hypermarket for large purchases is 18 minutes. The most frequently mentioned emotions that accompany clients in the queue to the cash desk are impatience (34%) and boredom (26%). Also, the respondents complained about abrupt and unfriendly (27%) and slow (25%) cashiers. Furthermore, 46% of all respondents admit that they would not return to the store if it would involve standing in a queue. Hence, the conducted research shows that retailers who are able to guarantee a short waiting time for their clients can count on a larger percentage of returning consumers.

Contemporary solutions for the automation of purchases on the FMCG market

2.1. SCO – Self-Checkout

The history of self-service cash registers goes back to the 90s in the United States, when, a self-service system was introduced in several public libraries. Thanks to this, readers were able to borrow books easily, with library employees having more time for other tasks. The first supermarket self-checkout point, in turn, appeared in 1995 in the Kroger retail network in the USA (Mendat, Mayhorn, 2007, pp. 1011-1014). Since then, self-service solutions have been applied all over the world. The path of the customer using self-service cash registers does not change until he reaches the cashier and want to pay for the products he intends to purchase. Thanks to automation solutions, the customer has two ways to choose. He can choose a traditional path to the manned cash register, or manually scan and pay for products on his own. Once he has scanned all products, the purchase order independently goes to billing and, depending on the cash point, he has the option of either paying in cash or by card. Hence, the entire transaction is without any interaction with the staff (Fig. 1).

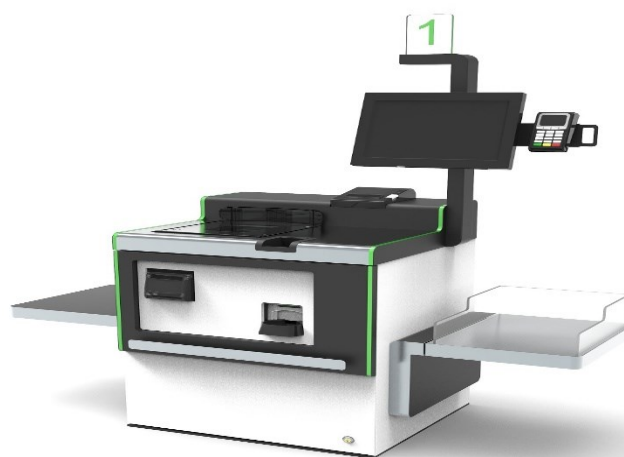


Figure 1. SCO Elzab. Source: www.elzab.com.pl/pl/produkty, 21.10.2019.

2.2. Mobile Scan & Go

Technology has undergone rapid changes over the past few years. Retail chains, using the development of personal technology, have launched applications that allow customers to scan products on their smartphone without using an additional device or encountering shop staff. In utilizing mobile scanning technology, the self-scanning of products by customers has relieved the shop staff of tedious activity, sped up the shopping process and provided an additional experience to the user. The first solutions of this type consisted in downloading a mobile scanner (Fig. 2) at the entrance to the store, then self-scanning each product as it is put in the basket or cart, and subsequently approaching the Scan & Go cash desk and making a payment in cash or by using a payment card.

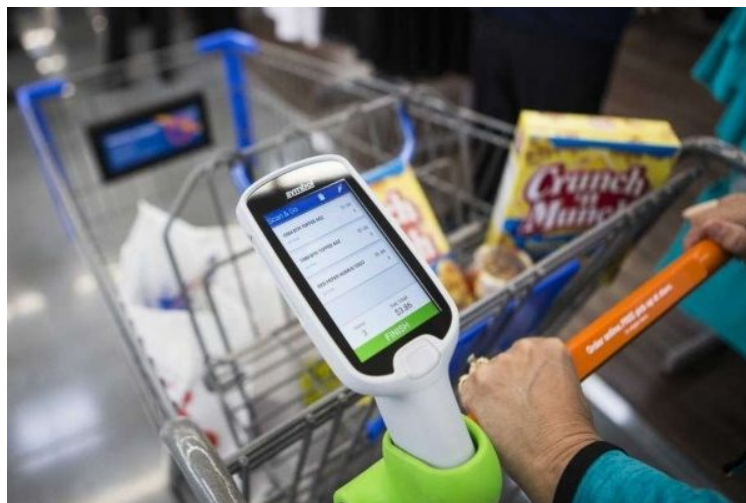


Figure 2. Mobile Scan & Go. Source: www.supermarketnews.com/online-retail/wal-mart-expands-scan-go-dallas-fort-worth-nashville, 21.10.2019.

By applying such a solution, the stores regain valuable shopping space right at the entrance to the store, where a stand with fixed scanners would have been before. In addition, the customer has the option of direct payment from the phone and access to the history of their purchases by means of the mobile application.

2.3. Self-service stores

Another automated solution that has been applied in brick and mortar stores is the fully self-service point of sale approach. The only fully functional example of such a service in Poland is the commercial network Bio Family Supermarket 24/7. In order to take advantage of this facility, the customer must first register with the home store, providing personal details, and after creating an account, he then receives an individual access card. Using the card, he can enter the store, make purchases, scan them at the self-service checkout, pay with a payment card and leave without any interaction with the store's employees. Thanks to this solution, the store is open every day of the year. Without staff, the store can still be used, for example, on public holidays.

A further example of the application of automated solutions is the Amazon Go prototype store located in Seattle, USA. The store of the Internet sales giant was created at the end of 2016 and its main point of interest is the lack of cash registers. The customer, on entering the store, has his unique customer card scanned, thanks to which artificial intelligence identifies him and follows his every activity within the premises. When the customer puts something in his basket or cart, the software automatically adds it to the bill. When leaving the store, the money for purchases is automatically taken from the payment card connected to the user's account in the Amazon system. Thanks to this solution, the stores can operate without service staff and the combined time devoted to shopping drastically decreases due to the lack of necessity to queue and scan and pay for purchases.

In Poland, Surge Cloud in June 2019, opened three prototype Take&Go stores in three cities in Poland. These are shops without cash registers, and as in the case of Amazon GO, the customer before entering the store is identified by an individual account in the application via his smartphone. While in the store, artificial intelligence will add to his account every product that he places in his basket or cart, and no fixed prices are displayed. Indeed, each customer, due to his shopping habits, will have different product prices, and products chosen most often will be available at a lower price over time.

3. SCO as automation of the purchase process - selected research results

The research was carried out in June 2019 in Poznań, in stores that are equipped with SCOs. As part of the study, individual interviews were conducted based on a prepared questionnaire containing 15 questions. The research adopted the principle of random selection. By random selection of the sample, we mean that in the downloading process, each datum has the same probability of getting into the sample. The low inclination of people to take part in the study was a difficult task. However, 80 respondents representing people aged 20-60 were recruited into the study. Of these, 35% were at the age of 30-40, 30% were at the age of 40-50%, 20% were people aged 20-30 and 25% were between 50-60 years. In the opinion of the majority of respondents aged 20-50, SCO cash desks are a solution that accelerates the purchase process and eases the burden of shopping. On the other hand, respondents aged over 50 mostly declared unwillingness to use this type of equipment (Fig. 3).

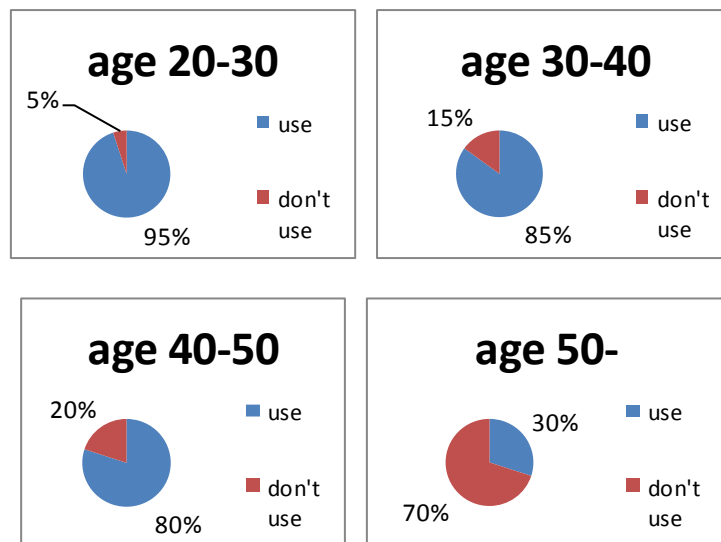


Figure 3. Use of SCO devices by age. Source: own study.

It is easy to notice that as the respondents' age increases, the interest in using SCOs is lower. At this point, it is worth indicating the reasons why certain respondents chose not to use SCOs. Respondents aged 50 and more indicated that the most important reasons for which they did not use SCOs were: fear of lack of self-service ability – 80% of all respondents in this class, fear of queue creation – 70%, health problems (sight, hearing) – 30%, the number of products in the basket – 60% of all respondents in this class. In contrast, respondents aged 20-50 stated SCO use was precluded because of the number of products in the basket – 70%, the belief that SCO technology is not faster – 10%, the need to call for service – 60% in the case of buying alcohol or tobacco or because of frequent failures (Fig. 4).

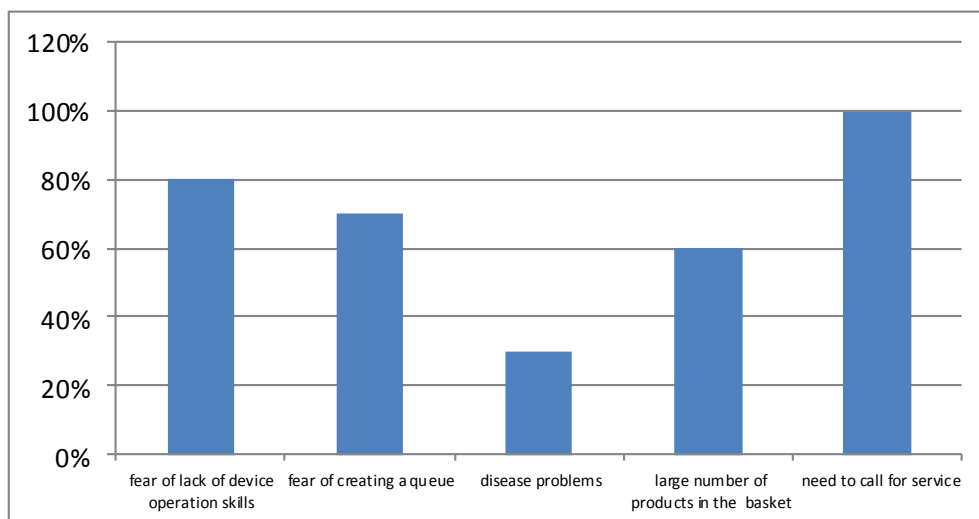


Figure 4. Reasons for not using SCOs. Source: own study.

With regard to SCOs, the respondents particularly pointed out difficulties/inefficiencies in terms of service. The most important were the necessity to call for service in the event of buying alcohol or tobacco in order to confirm the payment – 90% and also machine failure – 20%, the slowness of clients "ahead of them" – 10%, too long wait time – 15%, limited payment options

– 10%. Another drawback, which the respondents drew attention to, is the time which has to be spent on searching for fresh products, such as bread, fruit or vegetables. Some of the respondents claim that they are unintuitive and are too slow. Importantly, several respondents felt that the staff responsible for assisting clients at self-service check-ins required additional training.

In the next part of the study, respondents were asked to indicate the advantages of using SCOs. The advantage that appears most often is the faster payment process for purchased products. Herein, 90% of the respondents decided that self-service checkouts are a faster form of payment than are traditional cash registers. However, several respondents pointed out that this is a faster way to leave the store only if few items are purchased. One of the respondents stated that self-service bills "are only useful when you have up to 10 products in your basket". In contrast, some people also paid attention to the aspect of play and a sense of agency in the check-out process, as well as the ease in obtaining price confirmation of the product and running purchase total. One person commented: "speed, independence, fun".

Conclusion

Sales facilities have to keep up with the changing customer profile. Changes seem to be necessary in the ways of customer service and in the service offer itself, and innovations will play a significant role in doing so. Speed of service, no queues, certainty of the agreed purchase price are the challenges facing experts who create modern solutions. The presented research results show that SCO solutions are very popular, but they need improvement. The biggest barriers were: the need to call for service in order to confirm payments, processing failures, client slowness "ahead of them" which extends the waiting time for payment. Importantly, respondents also pointed out that, often, the staff responsible for assisting customers at self-service checkouts require additional training. It is also worth noting that more elderly customers assume in advance that they would not be able to cope with independent service.

Biographical notes

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