

An analysis on the impact of Logistics on Customer Service

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Summary

Research Question:	What is the connection between Logistics, customer service and customer Satisfaction levels? What are the role and importance of a Company's Logistics policies on the overall Customer Experience? What is a generally acceptable response time from a Customer Service?
Methods:	Empirical study based on a survey shared on Internet to evaluate the reaction of perspective customers to Customer Service and Logistic policies.
Results:	Logistics plays a significant role on the customer experience and retention both directly and indirectly.
Structure of the Article:	1. Essay; 2. Literature Review; 3. Research Questions & Methods; 4. Empirical Design; 5. Detailed Empirical Results; 6. Conclusions; 7. About the authors; 8. Literature

Essay

It has been widely observed how the rapid growth of new technologies changed shape to several everyday processes. Their pervasive character brought them to reach all aspects of life. Together with the diffusion of new information and communication tools and devices, the faster transportation of goods and information had the effect of reducing business costs and -maybe- introducing new customer behaviors.

The appearance and growth of online shops can be an illustrative example of this phenomenon. Webstores are, indeed, cheaper to open and maintain compared to a brick-and-mortar shop or chain.

Some online retailers became particularly popular. Their popularity actually grew to the point that they are able to compete both with all major online shops and brick-and-mortar retailer chains, even though it is not possible to physically try or test a product online.

Among the limitations of online shops when compared to the traditional ones are the lack of human contact and the impossibility to receive the goods in real time. Two core elements of online shopping are Logistics and Customer Service – ensuring that customers can receive the products ordered as soon as possible and that they can receive information and assistance whenever needed.

These two elements are tightly connected, at the point that several companies place Customer Service inside the Logistics business function, while others keep this service inside the Marketing area.

This article focuses then on the analysis of the impact of Logistics on Customer Service. It begins investigating the role of customer expectations and satisfaction, to then understand in what measure does Logistics intervene in this process.

Customer Service has been broadly described either as any services oriented in creating Customer Satisfaction, or as a series of activities and services aimed at increasing sales and Customer retention (Zinszer, 1976; Tucker, 1983).

In both cases the main goal is to ensure that customers will purchase again from the retailer. This strongly connects with the concept of Customer Equity, which has been defined as the sum of the discounted lifetime values of all customers and is based on brand, value and retention. As such, it is an intangible asset and therefore difficult to measure (Lemon, Rust, & Zeithaml, 2001, Kumar & George, 2007).

By focusing on Customer Equity and increasing the importance of the relationship with the customers, the significance of the products is proportionally lowered. The technological progress and the globalization increased the competition and at the same time much more customer data are available to companies, pushing firms towards a more customer centric approach (Urban, 2005).

Being able to provide information before a purchase, helping customers with their choice and to assist them after they bought their chosen product becomes much more important. The role of Customer Service emerges then as crucial in this whole picture to provide customer satisfaction and lead towards customer retention.

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Two interconnected concepts need to be taken in consideration to identify the overall importance of Customer Service: customer expectations and customer satisfaction. Their interaction results in customer retention.

The most influential factor of satisfaction is represented by the confirmation of the original expectations. In the overall purchase process, customer expectations are then crucial, as they contribute in defining the overall outcome. They are seen as a form of customer expectation on the overall purchase experience or as a customer desire on the incoming transaction.

Customer Satisfaction is generally defined as the overall perception of the quality of the overall service. While the non-fulfillment of a basic expectation can trigger a dissatisfaction, however, its fulfillment does not necessarily produce satisfaction. External factors can still impact the overall satisfaction, but a high Customer Satisfaction level generally results in a lower amount of complaints and a higher customer retention. (Wirtz & Lovelock, 2016).

This attention towards the satisfaction of customers evolved in the concept of Customer Delight. Basic fundament of this idea is that customers should always be delighted by the purchase experience; this feeling should be reached by always leaving positive memories of the purchase itself (Oliver, Rust, & Varki, 1997; Mittal & Kamakura, 2001; S.C. Chen, 2012; Berman, 2005).

To do so, companies spent efforts in increasing customer satisfaction, starting from offering a much higher amount of information to support the choice. However, this constant increase of offers by companies to increase the satisfaction also produced the effect that delight became simply expected by some customers.

Therefore, some companies started to offer honest, accurate and complete information over products, even when that may come from a competitor. Evolutionary to the concept of customer delight, this is defined “Customer Advocacy”, which aims at creating a mutual dialogue and a partnership with the customers to establish a feeling of loyalty and trust (Urban, 2005).

Logistics services seem to heavily contribute to the overall satisfaction for purchases. The availability of a product and its delivery times, the returns and warranty conditions are crucial aspects of customer service. This therefore affects the inventory management as well as the criteria of the distribution. Some authors even name that Logistics will be the new marketing (Göbl & Froschmayer, 2011).

Due to its link to the personal experiences, Customer Satisfaction is not easy to measure. Subjectivity is significant, and the variables involved complicate the overall picture. It was difficult to identify the impact of specific factors to the overall satisfaction. The response time from Customer Service has been identified as a potential hy-

giene factor – a faster reply should produce a higher satisfaction rate (van Riel, Liljander, Lemmink, & Streukens, 2004).

Literature Review

Customer Equity

When focusing on Customer Equity, a deep analysis was elaborated by R. Rust, V. Zeithaml and K. Lemon (2001), who defined it as the sum of the discounted lifetime values of all customers and confirming its main drivers as value equity, brand equity and relationship equity, standing for product values, corporate values and subjective relationship.

In line with this approach companies started to prefer long-term relationships on short-term transaction (Rust, Zeithaml, & Lemon, 2004).

The increasing importance of customers led to an increase of importance of Customer Satisfaction to produce retention (Rust, Zeithaml, & Lemon, 2000).

More recent studies analyse the impact of Social Media, finding that they can have a strong impact over the brand’s reputation, as Social Media marketing and word of mouth proved influential to Customer Equity and brand loyalty (Kim & Ko, 2012; Severi, Ling, & Nasermoadeli, 2014).

As this is an intangible asset, it is difficult to measure. Kumar and George (2007) indicate that companies therefore normally calculate the average lifetime value of customers, multiplying this by the total amount of their customers.

In an attempt to also value the intangible aspects, it becomes then important to clarify the difference in customer expectations that different clusters of customers have based on the age. Indeed, internet literacy and regular exposition to the efforts towards customer retention may have lead to different values depending on the customer’s age.

Customer Service

Customer Service seems to have developed since its original concepts. However, the earliest traces to link services and customer satisfaction can be found in the studies of Clark and Shaw (Clark, 1922; Shaw, 1912).

Zinszer (1976) indicates that Customer Service describes all critical activities needed to satisfy the customers. The constant growth of services and the technological innovation which took place in the following years brought sharp innovations on customer service, leaning always more towards a customer-centric perspective (Meidutė-Kavaliauskienė, Aranskis, & Litvinenko, 2014; Oliver,

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Rust, & Varki, 1997). It is thanks to these new technologies that Customer Service new core became the relation between customers and firms (Lawer & Knox, 2006; Mittal & Kamakura, 2001; Urban, 2004).

This service has also been identified as a marketing opportunity or as a logistics tool (Rinehart, Bixby Cooper, & Wagenheim, 1989). On a marketing perspective, Customer Service represents the activities related to the sale and aimed at the retention (Tucker, 1983).

More recently, Stock and Lambert (2001) as well as Christopher (2016) identified three elements of customer service, stressing the relation with Logistics: Pretransaction elements (policy, organization, management services), Transaction elements (stock level, order information, shipment etc.) and Posttransaction elements (installation, warranty, claims, returns etc.).

From a Logistics point of view, customer satisfaction can be drastically increased by inventory management, delivery times and reduction of the returns (Bowersox, Mentzer, & Speh, 2008).

Some studies are oriented towards a mixed approach integrating Marketing and Logistics, with Customer Service as the unifying factor. On the one hand, ensuring the delivery in the right time and at the right place; on the other an appropriate price and services control (Rinehart et al., 1989; Emerson & Grimm, 1996).

The “internal and subjective response” of customers to any contact (direct or indirect) with a firm generates the Customer Experience. This goes beyond the pure customer service, as it includes elements as packaging, advertisement, product quality as well website usability and product display (Klaus, 2013; Meyer & Schwager, 2007).

Involving customers holistically and consistently on a range of levels helps improving the customer experience and increase the loyalty (Gentile, Spiller, & Noci, 2007). As it does not take place in a brick-and-mortar location, the seller may not be able to control the whole Customer Experience aspects and therefore elements of the website, as images and text, stimulate the customer (S. Rose et al., 2012).

A successful example of the integration between Logistics, Marketing and Customer Service has recently been seen in Amazon, which mixes services and an accurate inventory and logistics management (Bensinger, 2012; Blodget, 2012; Hanley Frank, 2015; Lierow, Janssen, & D’Inca, 2016).

Online Customer Service

The availability of information accessible through internet empowers customers. In 2005, a rapidly increasing amount of customers was collecting information online prior to purchasing (Urban, 2005). Meanwhile, in the early years of the XXI century, more and more users purchase online: in the second quarter of 2014, 78% of the US population over 15 years of age completed online purchases (Smith, 2015; Lissitsa & Kol, 2016).

A significant reason for operating through internet was, for businesses, the opportunity to reduce costs in creating a relation with customers. However, as customers started encountering issues with their transactions and purchases, firms invested more in the quality of their online services to favour customer retention (Bilgihan, Kandampully & Zhang, 2016; Klaus, 2013).

It was understood that in an online context, the relation between satisfaction and loyalty can be even stronger than in an offline context (S. C. Chen, 2012). However, customers also expect an equal or even higher level of service online, rather than with the traditional channels. Trust has the highest influence in online customer satisfaction, while reliability is also determinant (Lee & Lin, 2005).

Logistics and Customer Service

The availability of information due to the technological evolution intervened also on the area of Logistics. While it led to a highly competitive environment, where product average life cycles shortened, this however also translates to a higher and more accurate information on inventory and demand (Patterson, Grimm, & Corsi, 2003).

This acquires more relevance when it is observed that as well as having a role in Customer Service, Logistics also participate in customer satisfaction. Indeed, the availability of an item and its delivery fully relies on its management (Mentzer, Flint, & Kent, 1999).

If customer service quality is measured on the difference between the final subjective quality perception and the original expectations, Logistics should be measured based on similar principles. Indeed, when logistics are simply seen from a Supply Chain or inventory perspective, the pure achievement of one specific standard or goal can lead to Customer dissatisfaction (Meidutė-Kavaliauskienė et al., 2014; Heskett, 1971).

A 1998 study identified that when logistics processes are applied with the purpose of customer satisfaction, they can influence positively a firm’s performance. This depends on the ability to respect Customer Service’s attributes (Tracey, 1998).

A lot of logistics elements can contribute to the perceived customer service level of a customer. As seen, logistics policies and customer service, tightly connected between each other, acquire a dynamic and essential role, which shows the need of a deeper understanding of the impact that logistics services have on the overall satisfaction in an online context and, more indirectly, of the importance of logistics on customer retention.

Customer Expectations and impacting factors

Customer Expectations influences Customer Satisfaction and retention, as the confirmation of the original expectations has been identified as the most influential factor of satisfaction (Y. Y. Chen, Huang, Hsu, Tseng, & Lee, 2010).

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In the past, expectations were viewed by consumer satisfaction literature as a form of customer prediction over the purchase experience, while service quality literature tended to see them as desires or wishes of customers towards a future transaction (B. R. Lewis & Mitchell, 1990).

Based on a 1991 study, a key driver of customer expectations was the price (for a higher price paid, a better service was expected). The research indicated that firms' customer satisfaction could be achieved by just delivering the basics. However, there was already the perception that companies could surprise customers by providing a higher service (Parasuraman, Berry, & Zeithaml, 1991).

A research in 1994 observed that the increase in the capability of the inventory management and efficiency may have had an impact in the customers' expectations (La Londe & Masters, 1994).

Some studies analyzed the impact of age over Customer Expectations. Before the wave of technological innovations, it was observed that older customers had a higher perception of courtesy, security and understanding the customers (Webster, 1989).

The spread of new technologies and the new concepts of Customer Delight and Customer Advocacy, may lead to believe that younger people may have higher expectations compared to older generations. Newer generations would be indeed more exposed to the possibility of ordering everything online, conveniently, and potentially return it.

Indeed, it has been observed in a 2016 research that the probability of purchasing online decreases with age for Generation X. For Generation Y this tendency is opposite, with an increase of online shopping with an increase of the age, probably due to the fact that younger members of generation Y are still unable to spend a significant amount of money online, while older members of Generation X would be more traditional in their shopping behavior (Lissitsa & Kol, 2016).

Customer Satisfaction and impacting factors

Customer Satisfaction is an essential concept in Customer Service. It was defined as "a customer's overall evaluation of the performance of an offering to date" and it may be affected by situational and reactional triggers (Gustafsson, Johnson, & Roos, 2005). Satisfaction is not necessarily the opposite of dissatisfaction, as the fulfillment of a basic expectation does not necessarily result in satisfaction (Berman, 2005).

A customer-oriented culture and partnership with customers and suppliers is essential to achieve customer satisfaction, as well as high level of employee satisfaction (Feciková, 2004).

A research published in 2000 suggested that there is no direct impact of Customer Satisfaction on the company profit. However, it has been recognized by several other

studies that the satisfaction has an impact through its outcomes: reduction of complaints and increase of the retention. Furthermore, Customer Satisfaction affects customer spending (Bernhardt, Donthu, & Kennett, 2000; Fornell, 1992; Mithas, Krishnan, & Fornell, 2005; Mittal & Kamakura, 2001; Urban, 2004; Fornell, Rust, & Dekimpe, 2010).

The behavioral outcomes of a high customer satisfaction are particularly represented by the loyalty and by the protection of the customer base from the effort of the competitors. This brings to a lower price of customer acquisition and an increase of the firm's reputation (Anderson, Fornell, & Lehmann, 1994; Oliver et al., 1997).

Therefore, customer satisfaction is protective and defensive and it leads less customers to search for alternatives (S. C. Chen, 2012; Kim & Ko, 2012).

A 2016 research indicates that customers generally expect online service to have a high standard, wherever they are located and whichever medium they are using (Bilgihan et al, 2016). This may be also due to the fact that, thanks to the internet, communication, products and services can be tailored to the customer. This may have on its own raised the bar on customer expectations (Rust et al., 2000; Hogan, Lemon, & Rust., 2002).

To reach a higher loyalty, several firms started to invest in the concept of Customer Delight, by raising the bar on the quality of the services given and providing a memorable experience (S. C. Chen, 2012; Mittal & Kamakura, 2001; Oliver et al., 1997). By providing a surprising service, delight can provide a much higher customer retention rate compared to a high satisfaction level. (Berman, 2005).

Customer delight is based on the fact that satisfaction level may have an emotional foundation (Oliver et al., 1997). Delight experiences can lead to "memories" of the experience itself and therefore raise the customer expectations. Customers would then attempt to repeat the experience or feel that this experience was unique and can't be repeated (Rust & Oliver, 2000).

However, if a firm constantly attempts to delight its customers, they already have the expectation to be delighted in their experience. The companies need therefore to live up to this expectation to avoid disappointing the customers and affecting the overall satisfaction (McQuitty, Finn, & Wiley, 2000).

The wide – and growing – amount of available information empowers customers by allowing them to search, select and purchase the items they are looking for (Constantinides, 2008; Lissitsa & Kol, 2016; Urban, 2005). Already in 2006, it was observed that the amount of information has reached such a spread that it may even lead to an overload and to the confusion of customers (Lawer & Knox, 2006).

To reduce this risk as well as the confusion and supporting customer's decisions, some firms moved towards the

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concept of Customer Advocacy. This is a further step forward in providing a higher customer service level. Companies started to provide complete and unbiased information to customers, providing advice on what product would suit their needs best, even if the best solution may come from a competitor. The purpose is to reach a long term loyalty (Constantinides, 2008; Lawer & Knox, 2006; Urban, 2005). However, a study observed that it is the reduction of customer's efforts, rather than the delight, to produce loyalty (Dixon, Freeman, & Toman, 2010).

Understanding what areas are the most important to customers, specifically the most influential factors when purchasing from their preferred retailers, could support a tailored focus of firms. This may help increasing the efficacy of the efforts towards customer satisfaction.

The response time also plays a significant role in Customer Satisfaction. A fast response increases the customer's evaluation of the service (Smith, Bolton, & Wagner, 1999). More technologically savvy customers are less tolerant to delays in customer service e-mail responses, compared to those who are less technologically educated. They are also more likely to share their bad experiences on internet platforms. The delay in the online response can lead to anger and frustration and, consequently, to a lower customer satisfaction (Mattila, Hanks, Andreau, & Kim, 2013; Mattila & Mount, 2003).

Research Questions & Methods

The development of customer equity is a key factor in understanding the importance that customer satisfaction values has gained for online retailers. Investigating on the elements of customer expectations and satisfaction can help tailoring the firms' efforts.

Customer service and logistics policies, together, seem to influence the customer retention and satisfaction. This impact may be different based on the age and possibly the original context of the customers themselves.

In a context where customers can easily switch from one retailer to a competitor and can access to a vast amount of information, it becomes increasingly important to not disappoint customers and to provide the highest possible level of satisfaction.

With this intention, the study behind this article focused on three main research areas and attempted to answer to six hypotheses. The three research focuses are: the general drivers of customer satisfaction and expectations; the pure logistics factors like free shipping and finally, the customer service factors like return policies.

An online survey was developed and proposed to a wide population through Social Media, forums and direct contact.

The six hypotheses formulated for this research are:

Hypothesis 1

As it seems that younger generations are more exposed to social media and more keen to purchase online, the hypothesis is that younger generations have higher expectations compared to older generations.

Hypothesis 2

More favorable return policies can impact positively in the purchase decision.

Hypothesis 3

Customer satisfaction is higher with a free shipping service.

Hypothesis 4

Customer satisfaction varies also based on the response time, with a higher result for shorter response time.

Hypothesis 5

Customer satisfaction is higher when real time channels are available.

Hypothesis 6

The results of all other hypothesis are different based on the country and educational level of the subjects interviewed.

Empirical Design

An empiric research based on a survey was elaborated to investigate further these topics. This allowed to have more information on customer satisfaction and expectation factors, both in terms of direct impact of Logistics and of Customer Service.

The survey was composed of 11 questions, with limited demographic data – age, country of origin and education level – as a last section. The only non mandatory question was the age.

As two questions were structured similarly, to prevent any biased answer they have been placed in two different areas of the questionnaire.

Most questions offered a Likert scale evaluation, while the two questions which presented similarities between each other required the interviewees to assign a total of 100 points to various online shop features.

These two questions were aimed at providing a pattern between the perceived importance of specific factors when purchasing from a preferred retailer against the expectations on the same factors when purchasing online in general.

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To ensure a firm response, most hypothesis find an answer in the combination of the results of at least two questions. Hypothesis 4 and 5 are answered by one result each; however, their results are tightly connected.

The survey was only available in English, to grant higher consistency in the results. Over 808 people who visited the survey, the 138 who completed the form represented 26 different countries, with a prevalence of Germans (44), Italians (30) and Americans (20). 115 participants indicated their age. Although the sample size was not highly representative of several countries and cultural contexts around the world, it still allowed to cluster information reliably at least in terms of age groups and most represented countries.

Detailed Empirical Results

Hypothesis 1:

To confirm that the exposition to younger generations have higher expectations compared to older ones, the results involving the customer expectations would have presented different values when comparing younger respondents and older ones.

The three values taken in consideration in the survey were: the expected window of days to be eligible for a refund when returning a good; the response time from the customer service; the amount of contact methods available to reach the customer service.

The respondents were clustered in three main groups: those younger than 26 years old (30 respondents); those between 27 and 37 years old (55 people) and finally,

those older than 37 years old (30 people). The groups were organized as representing the Generation X, the Generation Y and the younger respondents.

In terms of returns, the respondents were invited to provide their expected return window to be eligible for a refund. While the older generation seemed to have higher expectations compared to the younger ones, this was mainly due to the fact that the middle group (27-37 years old) presented a wider range of responses. When tested with an ANOVA and a Tukey test, all values were indicated not statistically relevant, as they were all presenting a much higher significance than 5% (Tables 1 and 2).

In terms of response time, the interviewees were asked to indicate their satisfaction level on a 5 values scale, with different response times from a Customer Service. The values offered were: Immediate, 6 hours, 24 hours, 48 hours, 72 hours. Younger generations seemed to present slightly higher satisfaction values with higher response times, compared to the other groups. Again, the results would indicate that the satisfaction rates seem higher for the younger generations compared to the older ones.

Also in this case an ANOVA and Tukey test revealed that the results present a higher significance than 5%.

In terms of the availability of contact methods, the respondents were asked to select which contact methods they expect to find when contacting a Customer Service. The methods offered were: Chat, Phone, E-mail and Text Message. The difference in the quantity of expected contact methods offered, based on the group, would indicate if the younger generations have higher expectations on this aspect.

Since, also in this case, the result is to be considered not statistically relevant after an ANOVA test, Hypothesis 1 could not be confirmed.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	660.566	2	330.283	0.480	0.620
Within Groups	76340.565	111	687.753		
Total	77001.132	113			

Table 1:

Anova test on the duration of the return window

		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-26 years old	27-37 years old	-5.306	5.952	0.647	-19.45	8.83
	Over 37 years old	-1.137	6.829	0.985	-17.36	15.09
27-37 years old	0-26 years old	5.306	5.952	0.647	-8.83	19.45
	Over 37 years old	4.169	6.018	0.768	-10.13	18.47
Over 37 years old	0-26 years old	1.137	6.829	0.985	-15.09	17.36
	27-37 years old	-4.169	6.018	0.768	-18.47	10.13

Table 2:

Multiple comparison (Tukey test) on the duration of the return window

Hypothesis 2:

To confirm that favorable return policies impact on the purchase decision, customers would indicate that favorable return policies are not an expected factor when purchasing online, this feature being at the same time important when purchasing from their preferred retailer. To do so, the interviewees were asked to spread 100 points to the most important factors when purchasing from their preferred retailers and to their expectations when purchasing online in general

At the same time, the subjects were asked to indicate how often they check the return policies before completing a purchase online.

77 interviewees assigned a total of 969 points to the favorable return policies when purchasing from their preferred retailer, while 83 assigned 1055 points to the same value when purchasing online in general.

Since one of the questions had two additional options – specifically, among the most important factors when purchasing from a preferred retailer –, to achieve a consistent comparison on the exact same features, only the 72 responses which gave a value of 0 points to both these features were then considered (Tables 3 and 4. After filtering the data, the majority of the interviewees (over 60%) assigned 7.65% points to this value when generally purchasing online, with an average of 12.71 points. When purchasing from a preferred retailer, the same aspect was

selected by a lower amount of subjects (over 56%), for a total of 7,02% points and a mean of 12,58 points.

Taken in perspective, this factor was not selected as one of the most impacting on the purchase itself. The filtered results showed a slightly higher importance of this factor when purchasing from a preferred retailer, but unfortunately, in this case a paired t-Test showed that the difference is not significant.

To additionally support this hypothesis, it has also been analyzed how frequently customers evaluate the return policies before completing a purchase. In this case, the interviewees were invited to provide a value between “never” (1) and “always” (5). As the result observed presented a mean value of M=3.23, with 40 respondents for the lower range and 52 for the upper one. This result was considered statistically relevant after performing a one sample t-Test, suggesting that customers are somewhat sensitive to the return policies prior to completing a purchase (table 5).

In conclusion, while the presence of favorable return policies seems not to have a major impact on the purchase decision, the responders indicated that they tend to evaluate the return policies before completing a purchase. This probably means that, while return policies taken alone have no major influence on the purchase, the presence of information regarding the return policies can positively impact the overall experience.

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Hypothesis 3:

Preferred Retailer	N	Minimum	Maximum	Sum	Mean	Std. Deviation	% Points
Lower Price	72	0	80	2215	30.76	20.974	30.764%
High Choice	72	0	70	938	13.03	15.579	13.028%
More information	72	0	30	402	5.58	8.316	5.583%
Popularity	72	0	25	80	1.11	4.130	1.111%
Safety of transaction	72	0	90	642	8.92	16.198	8.917%
Fast Express Delivery	72	0	100	615	8.54	14.326	8.542%
Free Delivery	72	0	100	695	9.65	13.950	9.653%
Tracked Shipment	72	0	15	170	2.36	4.095	2.361%
Fast overall experience	72	0	50	363	5.04	10.979	5.042%
High Quality Customer Service	72	0	60	510	7.08	12.096	7.083%
Favorable return policies	72	0	30	570	7.92	9.183	7.917%

Table 3:

Most important values when purchasing from a preferred retailer (excluding test values)

General Expectations	N	Minimum	Maximum	Sum	Mean	Std. Deviation	% Points
Lower Price	72	0	100	2077	28.85	22.070	28.847%
High Choice	72	0	50	925	12.85	13.317	12.847%
Detailed info	72	0	30	625	8.68	9.605	8.681%
Popularity	72	0	20	100	1.39	3.866	1.389%
Safety of transaction	72	0	40	850	11.81	11.454	11.806%
Fast Express Delivery	72	0	60	455	6.32	10.648	6.319%
Free Delivery	72	0	40	640	8.89	9.239	8.889%
Tracked Shipment	72	0	15	178	2.47	4.101	2.472%
Fast overall experience	72	0	50	410	5.69	10.011	5.694%
High Quality Customer Service	72	0	40	397	5.51	8.705	5.514%
Favorable return policies	72	0	30	543	7.54	9.111	7.542%

Table 4:

General expectations when purchasing online (excluding test values)

	N	Mean	Std. Deviation	Std. Error Mean
Evaluation of return policies	138	3.23	1.129	0.096

Table 5:

Evaluation of return policies before completing a purchase

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To evaluate the different in customer satisfaction with or without a free shipping service, two elements were assessed. On one side, the importance of a free delivery service was analyzed using the results of the same question already used for Hypothesis 2; additionally, the subjects

were offered a self-evaluation question where they would indicate on a Likert scale whether the presence of free delivery would impact positively on their satisfaction levels.

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Free Delivery (General expectations)	98	5	40	1212	12.37	6.909
Free Delivery (Preferred Retailer)	95	1	100	1284	13.52	11.314
Valid N (listwise)	84					

Table 6:

Free delivery as general expectation when purchasing online and importance level when purchasing form a preferred retailer

Of all respondents, 95 gave a positive value to free delivery as an important factor when purchasing from a preferred retailer. The total points amounted to 1284. This can be compared to the result of the general expectations when generally purchasing online, in which 98 interviewees assigned a total of 1212 points (Table 6).

of points was assigned to this factor when purchasing from a preferred retailer, against 8.89% in general expectations. It is therefore possible to observe that free delivery is the third most important factor when purchasing from a preferred retailer, while its relevance seems lower in terms of general expectations.

A total 69.34% participants assigned points to this value when purchasing from a preferred retailer; against 71.53% in terms of general expectations. A total 9.30%

Based on a Paired t-Test, it was possible to observe that this data is valid, confirming that a free delivery service is an important element of retention (Table 7)

	N	Correlation	Sig.
Free Delivery (General Expectations) & Free Delivery (Preferred Retailer)	72	0.297	0.011

Table 7:

Paired t-Test for Free Delivery

Self-evaluation

The result of this question indicated clearly that the presence of a free delivery option is felt to have a positive impact on the customer expectations. Out of 138 respondents, 109 gave the highest two values (“often” and “always”). A T-Test with neutral value “sometimes” confirmed the validity of this result.

It is then possible to conclude that the presence of a free delivery service is one of the most relevant features when purchasing from a preferred retailer, though this option is not expected in the same measure when purchasing in general. At the same time, a vast majority of the interviewees agree that this option impacts their purchase experience (Table 8).

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	Frequency	Percent	Valid Percent	Cumulative Percent
1 (Never)	6	4.3	4.3	4.3
2 (Rarely)	5	3.6	3.6	8.0
3 (Sometimes)	18	13.0	13.0	21.0
4 (Often)	64	46.4	46.4	67.4
5 (Always)	45	32.6	32.6	100.0
Total	138	100.0	100.0	

Table 8:
Satisfaction levels based on response time

Hypothesis 4:

This hypothesis focuses on the difference in customer satisfaction based on the response time from a customer service.

As mentioned for Hypothesis 1, a specific question asked the interviewees to identify their satisfaction value with different response times on a scale, by indicating a value between “Highly dissatisfied” (1) and “Highly satisfied” (5) (Table 9).

The data shows a pattern of decrease of satisfaction with an increase of the response time, with the widest drop in satisfaction between 24 and 48 hours of response. The validity of this result was confirmed with a T-Test, with “Neither dissatisfied nor satisfied” (3) as a neutral value.

In conclusion, the highest satisfaction rate is a associate with the shortest response. Additionally, a drop in satisfaction is registered with a higher response time than 24 hours (Table 10).

	N	Mean	Std. Deviation	Std. Error Mean
Immediate	138	4.64	0.911	0.078
Within 6 hours	138	4.18	0.991	0.084
Within 24 hours	138	3.41	1.065	0.091
Within 48 hours	138	2.33	1.026	0.087
Within 72 hours	138	1.67	0.998	0.085

Table 9:
Satisfaction levels for Customer Service response time

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Immediate	21.220	137	0.000	1.645	1.49	1.80
Within 6 hours	14.005	137	0.000	1.181	1.01	1.35
Within 24 hours	4.555	137	0.000	0.413	0.23	0.59
Within 48 hours	-7.713	137	0.000	-0.674	-0.85	-0.50
Within 72 hours	-15.616	137	0.000	-1.326	-1.49	-1.16

Table 10:
One-Sample T-Test. Satisfaction levels for Customer Service response time

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Hypothesis 5:

The goal of this hypothesis is to understand whether the availability of communication method with a direct response, like chat and phone, participate in creating a different customer satisfaction level compared to delayed contact methods, as for example the e-mail.

In order to answer to this hypothesis, customers were asked to indicate what contact method they would be most likely to use, provided that all indicated methods were available. The suggested contact methods were chat, phone, e-mail and text message.

The result of this question shows that 67.4% answers are in favor of real time contact methods. The highest values were achieved by the chat, with 38.4% preferences. E-mail followed with 31.9%; phone received 29% of the preference and text messages, with only one result, achieved less than 1% (Table 11).

A Chi-Square test showed that the values are statistically valid. It is therefore possible to consider this hypothesis confirmed (Table 12).

The fact that the chat appears to be the preferred contact method and that the phone was not the preferred channel may depend on the age, but also open to further research on the psychological effect of the chat on customers.

Hypothesis 6:

This hypothesis is the most articulated, as it evaluates personal backgrounds (education, country of origin) to understand whether there may be any differences in the results of the previous hypothesis due to these factors. To do so, the three most represented countries were selected. With a total population of 94 interviewees, these countries were Germany, Italy and USA.

In terms of studies, a division was made between: "lower than High School, High School, Bachelor, Masters Degree and PhD / Doctorate".

Unfortunately, due to the small sample size it was not possible to combine the two different clusters.

Every hypothesis has been then reassessed based on the two elements of country and education. Unfortunately, however, all tests were considered statistically invalid.

	Frequency	Percent	Valid Percent	Cumulative Percent
1 - Chat	53	38.4	38.4	38.4
2 - Phone	40	29.0	29.0	67.4
3 - Email	44	31.9	31.9	99.3
4 - Text Message	1	0.7	0.7	100.0
Total	138	100.0	100.0	

Table 11:

Most likely used contact method if all were available

	Likely used channel
Chi-Square	45.942
Df	3
Sig.	0.000

Table 12:

Chi-square test on most likely used contact method

Conclusions

Management applications

This research attempted to provide some more understanding on the value of logistics in the overall purchase

experience and on its contribution to customer satisfaction.

With its presence in all phases of a purchase, from the inventory to the fulfillment and the eventual returns, logistics participates to the whole customer experience.

It seems clear that the main driver, both in terms of expectations and importance, is the price. Customers seem

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to expect online retailers to offer lower prices and this is determinant when purchasing from a preferred retailer. However, a sum of the logistics factors seems to amount to over 45% importance when purchasing from a preferred retailer and to over 46% in terms of general expectations. In this picture, return policies don't seem to have a direct impact over the purchase decision. However, it was clarified that customers tend to evaluate the return policies before completing a purchase. Providing clear and transparent information on the after-sales seem to have an impact on the purchase itself.

This would support the fact that promoting logistics services can positively constitute a positive marketing element. High logistics standards contribute to satisfaction, while indirectly this impacts on customer retention.

In contrast, a free delivery service has, a direct impact on Customer Satisfaction. Although not always expected when purchasing online, this service seems to strongly impact their overall experience.

Customer Service response time impacts the overall satisfaction. While customers seem to be dissatisfied with a response time over 24 hours, an immediate reply provides the best results. Offering a chat service seems to be an effective way to provide a real time answer and the highest satisfaction.

Limitations

Unfortunately, not all hypothesis could find a definitive answer. The main reason behind this is that even reducing the clustering, the population samples were simply too small to allow any pattern to show. For example, understanding the impact of the personal background revealed particularly difficult.

This can, however, be the basis of further future investigation on a wider sample, which includes comparably large amount of respondents from different origin and educational basis.

A further limitation of this study may be due to the survey response in terms of behavior when purchasing in general and from a specific retailer. While the two questions which presented strong similarities have been distanced in the survey, a small chance of biased answer persists. Further studies should therefore keep this aspect in consideration in order to grant a more defined result.

Finally, while the survey was only proposed in English to ensure higher consistency, this may have constituted a barrier to online customers who do not speak this language.

Further research

As seen, further research on a more distributed and larger sample, could indicate if these results were vary based on cultural or educational differences.

The impact of return policies on the purchase presented a mixed result. A wider survey population would make it

possible to confirm totally or partially the patterns observed.

A larger age sample would allow for a clearer understanding on the differences in customer satisfaction based on the contact method with customer service. For example, it would be then possible to cluster the preference towards specific contact methods by particular age groups.

Understanding behavioral patterns will be a key factor when evaluating the characters that the services should have to grant a more tailored service.

To reach a substantial participation from all age groups in different countries, providing a survey with a valid and official translation may prove beneficial to compare the different clusters.

Finally, while this study attempted to identify patterns and behaviors when purchasing online, further research could provide a deeper insight on the comparison between same parameters from brick-and-mortar contexts.

About the Authors

Francesco Querin works as Process and Integration Manager in a startup based in Munich, Germany. After several years spent in the Customer Service environment, he focused his research interests around the concept of Customer Services and Logistics as core marketing elements for companies. With this in mind, he completed his MBA at the University of Applied Sciences in Kempten, Germany in 2017.

Prof. Dr. Martin Göbl has been lecturing in logistics and business management at the University of Applied Sciences in Kempten, Germany since 2006. After graduating as an industrial engineer, he worked in different areas and positions in the area of logistics management. While working he graduated as a PHD. His research interests are the evaluation of services, strategic logistics management and logistics service providers.

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