



THE LOGISTICS OF INFORMATION IN CUSTOMER SERVICE OF ONLINE CLOTHING SHOPS

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ABSTRACT

The primary objective of this article is to present information logistics as a crucial component of servicing the customers of online clothing stores. The article assesses the relationship between store-transferred information transferred and the rating given by customers. Furthermore, the article explicates the necessity to treat information as a resource, outlines the logistics of information and its influence on the functioning of e-commerce, focusing on the most prominent characteristics of e-trade in Poland, especially in the clothing sector.

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INTRODUCTION

Poland has experienced a dynamic growth of the e-commerce sector within the last few years. In this period, e-trade transitioned from an expensive and highly specialized process into a simple, practical and widely accessible alternative (Morris, 2001). Clothing is one of the fastest growing areas of e-commerce (E-commerce Report, 2017). This is driven by the fact that customers began to notice the comfort and possibilities of e-shopping, due to the efforts some e-stores towards meeting their customers' expectations and maximizing the convenience of online shopping. Stringent requirements governing customer service have been developed (Kozerska, 2014), which result from the fact that customer's bargaining position grows in proportion to the competition on the market. It is difficult to build a stable competitive advantage, as it necessitates searching for new means of increasing sales and instilling trust in the customers. Information is one of the foundational resources in e-commerce but it is often bypassed

in the decision-making processes for which it is essential. It is thus necessary to implement adequate logistics of said resource, thereby allowing companies to establish a permanent competitive advantage.

INFORMATION AS A LOGISTICAL RESOURCE

In order to fully appreciate the necessity to treat information as a resource, it is crucial to first understand and define the word “information”. Because this concept has a very intuitive meaning, writers and scholars typically omit any attempts at providing a definition. This leads to the blurring of boundaries between “information” and other related concepts, such as “data” or “knowledge” (Heracleous, 1998). While these terms are indeed related to one another, their exact meanings and etymology are different. What is meant by data is all types of unstructured, singular facts regarding a given object or an event. These may come as results of observations or research, as raw statistical data or records of transactions, all of which may be utilised as substrates in the process of creating information, which – in contrast to data – is imbued with meaning and accomplishes a specific objective. Transforming data into information confers on it an additional value, which in turn makes it of greater priority and emphasizes its superiority over data. In brief, information may be defined as processed, contextualised and interpreted data. All information is subjective and it has to be analysed in reference to its receiver, which results from the fact that the same data may be interpreted differently by different people depending on their knowledge.

We may thus assume that information is constructed in the process of producing (creating) data. Information may be stored and sold. This capacity to be produced, stored and sold, in turn, is typical of resources, which is why information ought to be treated as a resource. However, what makes information unique is that it does not get depleted while it is being produced. What constitutes its production is, among others, the decision-making process, which produces a decision directly fueled by the relevant information being delivered. The major discrepancy between information and typical resources is its immaterial state of being – although information may assume a material form when it is stored in data banks, servers or storage devices, its primary manifestation is immaterial and what is being stored is merely strings of 1’s and 0’s encoded in a binary system.

To begin to view information as a resource, appropriate logistics are required, by which we mean any intentional human activity, both within the context of business as well as outside of it. The essence of logistics is to steer the processes of resource transfer within and between cooperating business organisations in logistical channels and chains (Chaberek, 2002). Information is one such resource and its usage within companies should be conducted in a profitable and effective way. In today’s fluctuating economy, this is particularly difficult and that is the reason why logistics as a means of rationalising the basic processes is so crucial in building a competitive advantage (Szmelter, 2013). Logistical information processing requires creating systems designed to circulate, store and process information; it also makes it necessary to ensure correct realisation of primary and ancillary processes. The precondition for this to occur is to

first furnish adequate tools allowing for the implementation of said processes and to deliver adequate technical and organizational solutions.

The essential goal of these actions is to make logistical objectives achievable (5R) as far as information is concerned, which means delivering the required information in the required time, place, amount and at an acceptable price. It is thus vital to include preventative measures counteracting information pathologies as one of the goals of logistics.

As emphasised in this article, information functioning as a resource for businesses has been steadily growing in importance. Next to labour, capital and land, it is becoming one of the strategic resources of any company. This requires that information handling companies take more interest in logistics, including logistics of information. The goal of the logistics of information should be to maximise the utility of the machines, tools and technologies used in the sphere of information delivery (Chaberek, 2001). Companies from the e-commerce sector are now facing the monumental challenge of creating a system of information logistics incorporating multiple sub-systems, servicing multiple users (not only those with a company, but also outside customers) and functioning in a rapidly developing market. If designed correctly, a system of handling information logistics will enable transformation of data into information while taking into account the goals listed herein, which should result in a conquest of the e-commerce market.

THE RELATION BETWEEN E-TRADE AND INFORMATION LOGISTICS

The relevant writings regarding this subject area do not allow pinpointing the emergence of e-trade. Many authors subscribe to the view that e-commerce was born when the Internet became commercially exploitable, that is the early 90's of the 20th century (Tian & Stewart, 2006). Commercial exploitation of the web gave rise to the concept of e-commerce, which – just like the Internet itself – has been evolving and adjusting to the changes in the world from the moment of its inception. However, e-commerce, although not officially functioning under this name, existed much earlier. Within the topic of e-commerce, it is common to view the terms “e-commerce” and “e-business” as equivalent. Both business owners and authors use these terms interchangeably, which, unfortunately, is incorrect. The same applies to traditional trade, which is a part of business in the same way that e-trade is a part of electronic business, or e-business (Szpringer, 2000). This relationship has been illustrated in Figure 1. E-economy is the broadest of all terms, denoting a virtual arena within which business operations – such as transactions – take place. In the process, value is being generated and exchanged, and direct interactions between the actors emerge (Gregor & Stawiszyński, 2002).

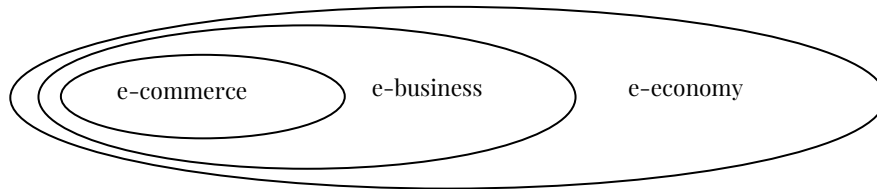


Figure 1. Interrelations between e-commerce, e-business, and e-economy

Source: Own elaboration based on (Gregor & Stawiszyński, 2002 p.77).

The easiest and at the same time simplest definition of e-trade is the activity of making online trading transactions (Oxford Dictionaries, 2016). However, one should note that said transactions do not have to be made via the Internet. Some other channels used in e-commerce include EDI, satellite and cable TV, phones, electronic cards and both Intra- and Extranet. Given all these diverse means of communicating, we might safely conclude that e-trade was used for commercial purposes before the Internet was popularised, even though it was called as such. An example of the existence of e-commerce in Poland prior to the “Internet era” comes in the form telemarketing, which used phone numbers prefaced by 0700 to sell products, whereby the TV advertising, sales conducted via phone and the transactions in the form the connection fee were all done electronically, allowing for the entire system to be classified as e-commerce (Jasiński, 2013). However, throughout the course of its development the Internet dominated all other channels of e-trade as well, which is often discussed as taking place via the Internet.

The definition submitted by Ph. Kotler (2002) is a much broader one, as it allows for a multiplicity of sales channels and views the term “e-trade” as involving any processes of purchasing and selling through electronic means. It is immediately obvious that this definition covers a variety of electronic means of making sales.

Two more definitions are pertinent to the topic of this article, namely, one offered by the World Trade Organisation (WTO, 2016), and one espoused by The Organisation for Economic Co-operation and Development (OECD, 2016). The former understands e-trade as the activity of producing, advertising, selling and distributing products via the networks of teleinformatics. The latter, in turn, posits that included in the definition of the term should be clearly separated electronic transaction, as well as transactions made on the Internet. The term *electronic transactions* stands here for selling and buying goods or services by means of computer networks regardless of who the parties involved in the process are. What characterises an internet transaction is that the Internet constitutes the means of communication between the contractors. GUS (Polish Main Statistical Office), in turn, adduces a definition of e-trade that limits it to only those activities that are performed on the Internet and with the use of Electronic Data Interchange (EDI). According to GUS (2016), e-trade consists in ordering products and services through the web, but payment for and delivery of said commodities may be realised both within and outside the web. Transactions may be made between business organisations, individuals, government institutions and other private and public agents and any orders made via phone, fax or e-mail are not viewed as part of e-trade.

All of the definitions adduced above share fundamental similarities, which are as follows:

- Purchases and sales are made via electronic channels;
- The primary means of making transactions (including payments) and communicating between the parties is the Internet;
- Delivery of services or products may be conducted either through the Internet or outside of it.

The relevant writings regarding this topic offer more definitions of e-trade, which are characterized by incongruities ranging in scope and nature. In part, this results from the necessity to constantly adjust to the current trends, globalisation and customers' needs, but what is of even greater importance is the never-ending, rapid development of new technologies. These similarities, however, do not imply a complete lack of differences or definitional imprecisions, which are a consequence of conflating e-trade with e-business or other related terms.

The most important aspect unifying the aforementioned definitions is that they all specify the exact route of making transactions and communicating between a provider and their customer. In case of electronic distribution channels, we are primarily dealing with information flow, which is the most fundamental component of e-trade. It takes priority over the flow of money or material goods. Business organisations dealing in e-trade generate, absorb and utilise vast amounts of information due to the nature of their activity, the means of communication they employ, the sales channels they use and the way transactions are finalised. Figure 2 shows a visual representation of the information and data flow as compared with the flow of material goods.

This model of information flow refers to one of the most commonly used systems of e-trade, that is, the business-to-customer model, known as B2C. This is a business model of conducting e-trade based on the parties involved in a given transaction. According to Nemat (2001), it has four sub-categories:

- B2B (Business-to-Business);
- B2A (Business-to-Administration);
- C2C (Customer-to-Customer);
- C2B (Customer-to-Business).

However, regardless of which model we decide to follow or how we classify said models, there will be similar proportions between information flow and the flow of goods and services in all of them. For e-trade, information is a key resource and its primary function is to support the decision-making processes of the customers (such as a decision on whether to make a purchase at all, which variant of a product to choose, which delivery alternative to opt for, which payment method to select, etc.) as well as those of the business organization (choosing which products to sell, how to determine their pricing, how to create and update the way products are bought, etc.).

In summary, the model and functioning of e-trade presented herein are built on information logistics, even though this fact is commonly omitted. Therefore, fully functional information logistics may prove to be crucial for any business within the e-commerce sector that intends to gain a competitive advantage.

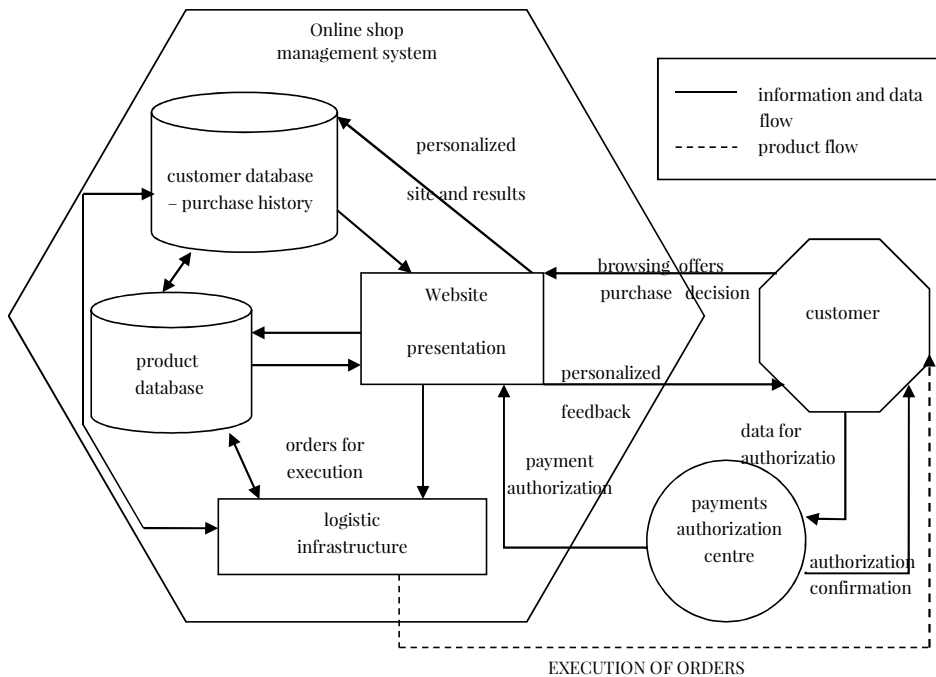


Figure 2. Model of information and product flow in an e-commerce company
 Source: Own elaboration.

E-COMMERCE IN POLAND

The most important factor affecting the growth of e-commerce in Poland is the informatisation of the society. Figure 3 shows that there is a steady, continuous growth in the number of people with Internet access. While this number stood at 27% in 2005 (Megapanel PBI, 2015), it increased to 51% in 2010 (Megapanel PBI, 2015) and the projections for 2017 predict that 79% Poles will have Internet access (E-commerce Report in Poland, 2017), which translates into 26.5 million people. However, only 53% of them admit to making purchases online in Polish e-stores (E-commerce Report in Poland, 2017).

The value of the Polish e-commerce market in 2016 was approximately 36 billion PLN (E-commerce Report in Poland, 2016). According to the last "E-commerce Report 2017", it will increase by about 12%, thus reaching the value of 40 billion PLN. The e-trade in Poland is so dynamic that it has seen an annual double-digit growth for the last five years (Figure 4). The analysis of this data reveals that e-commerce in Poland still holds a vast, untapped potential for further growth, which will lead to increasing competitiveness on the market.

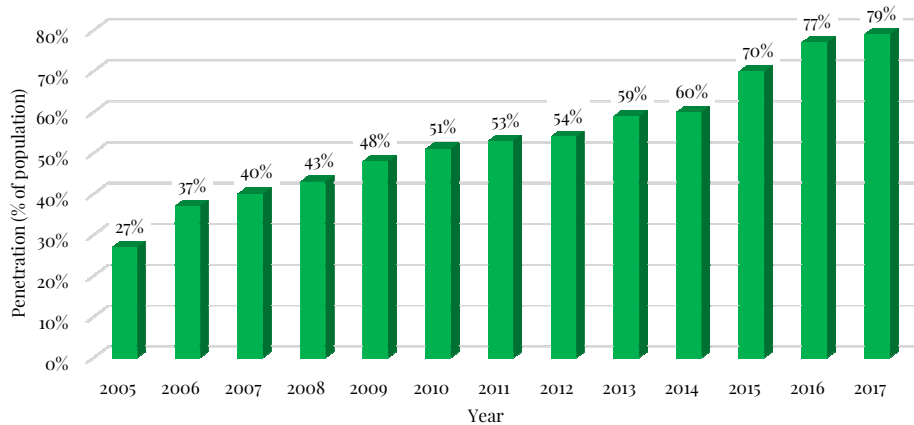


Figure 3. Percent population with the Internet access (in Poland)

Source: Own elaboration based on Megapanel PBI, 2015; E-commerce Report in Poland, 2017.

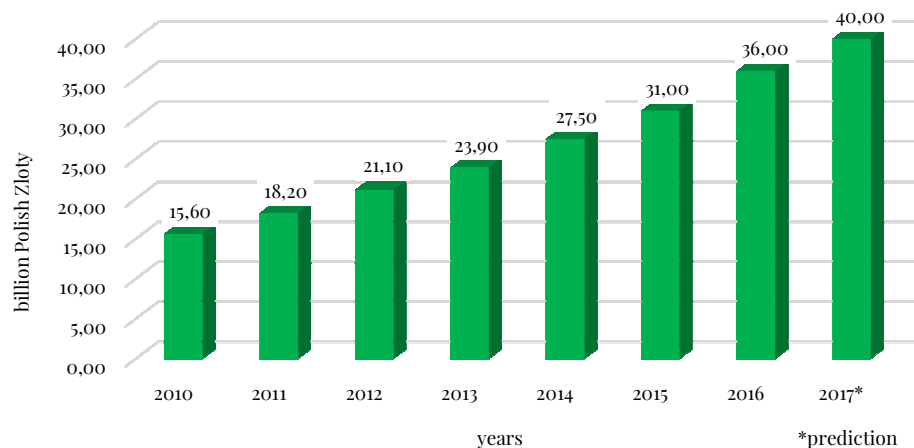


Figure 4. Value of e-commerce market in Poland

Source: Own elaboration based on E-commerce Report in Poland, 2016; E-commerce Report 2017.

Consumers aged 35-49 constitute the most numerous group of Polish e-customers. The next two groups are on par and they belong to the following age range categories: 15-24 and 25-34. The age group that does the least shopping online is customers who are 50 or older. Those who do their shopping online usually have high school education and live in cities with up to 200,000 inhabitants.

Another area that shows a positive trend is the shift in what drives customers to buy online. The E-commerce Report in Poland for 2016 and 2017 demonstrates that price is not one of the primary incentives for people to buy online. This possibly implies that e-commerce in Poland has evolved to an extent where competitiveness is not determined solely by pricing. What 2017 e-customers value the most is round-the-clock availability (82% of online shoppers in Poland), allowing them to avoid going to a retail

store (77%), and lack of any time constraints within which a shopping decision has to be made (76%). There are thus sufficient grounds to assume that the role of factors other than pricing in the competitive struggles between online businesses will be only increasing over time.

The clothing sector of e-commerce in Poland

The category that enjoys the greatest popularity among Polish e-customers includes clothing and accessories (E-commerce Report in Poland, 2017). Next to electronics, this is the fastest growing sector of online shopping in Poland and its annual growth is estimated at 20 to 30% (a report on the research into the omni-channelity of the fashion industry in Poland, 2015). On average, a typical e-customer spent 82.6 PLN a month on clothes in 2017, the same as in 2016 (E-commerce Report, 2016 and 2017).

The clothing sector of e-commerce is characterised by the ROBO effect (Research Online, Buy Offline). In 2017, 42% of the surveyed web users admitted that they browse through the products online but purchase them in brick-and-mortar stores (E-commerce Report, 2017). The data regarding ROBO confirm that the nature and characteristics of the clothing sector make it most amenable to the implementation of the Omnichannel strategy whose goal is to fully integrate all sales channels to allow the customer feel the same degree of satisfaction regardless of which channel they selected to start the purchase and which they used to finalise it (Weiland, 2016).

Another distinguishing feature of the clothing sector is high emphasis on servicing product returns and complaints, which results mainly from the nature of the products sold online. However, it must be stressed that furnishing detailed, individualised descriptions of the products offered (such as their exact sizes) leads to a decrease in the number of returns resulting from purchasing the wrong product. Therefore, this sector is highly sensitive to the quality of information utilised in the process of servicing the customers.

RESEARCH METHODOLOGY

There is a great number of e-stores operating within the clothing sector and there are multiple differences between them. Some are small-to-medium businesses offer a limited range of products and function online only, while others are huge, international corporations that have many retail stores in addition to their online presence. Ten clothing e-stores offering their goods and services in Poland (A, B, C, D, E, F, G, H, I and J) were analysed. They were selected based on a 2016 ranking list of the leading clothing e-stores created by opineo.pl, which collects data on stores and products. The first five (A, B, C, D, E) were randomly extracted from the top 10 list, while the rest (F, G, H, I, J) are stores positioned in the range of 11 to 100, also randomly selected. What was primarily taken into account when compiling the list was the access to information from the point of view of the customer, as well as information regarding sales channels used by the stores under analysis.

The analysis yielded the following results:

First, the analysts looked at the information regarding sales channels that the following stores make available to their customers: A, B, C, D, E (Table 1).

Table 1. Information regarding sales channels in stores A, B, C, D, E

Information regarding sales channels:	5 out of the top 10 e-stores (opineo ranking, 2016)				
	A	B	C	D	E
Online store	yes	yes	yes	yes	yes
Retail store	yes	no	yes	yes	yes
Ordering via phone	yes	yes	no	yes	no

Source: Own elaboration.

Stores A and D enable their customers to make purchases through three channels: their website, in retail stores and by phone. By contrast, Store B does not offer the possibility of offline, in-store shopping, which naturally eliminates this route of purchasing their products. In Stores C and E, in turn, it is impossible to place an order by phone as the company contact number serves only as a means of acquiring information regarding the products, the store itself and the status of the order.

Table 2. Information regarding sales channels in stores F, G, H, I, J

Information regarding sales channels:	Shops ranking 11 to 100 (opineo ranking, 2016)				
	F	G	H	I	J
Online store	yes	yes	yes	yes	yes
Brick-and-mortar store	no	yes	no	no	yes
Ordering via phone	yes	yes	yes	yes	no

Source: Own elaboration.

Here (Table 2), only Store G allows their customers to utilise the entire range of sales channels. Stores F, H and I conduct sales through shipping only, although they do make it possible to place an order by phone. Store J operates online and owns brick-and-mortar stores, but its customers cannot place orders by phone.

The next part of the analysis takes into account access to information that the customer has:

- Accessibility of the rules and regulations section from the home page;
- Clearly stated and easily readable information regarding deliveries;
- Clearly stated and easily understandable information regarding the return and complaint policy;
- Availability of the purchase cancellation form;
- Information regarding the available means of making payments included in the product description;
- Information regarding shipping costs available on a product sub-page;
- Contact information available on every sub-page;
- Information regarding a product and its variations;
- Information regarding the available sizes (as well the measurement system);
- Information on whether the prices are identical across all sales channels;
- Online, up-to-date information regarding product availability;
- Information regarding stock status in the brick-and-mortar stores;

- Information regarding the status of the order once it has been placed;
- Information regarding the level of transactional safety guaranteed by the store and information on whether the store's website is encrypted;
- Access to the information regarding a store's safety policy and personal data protection for the customers.

Table 3. Access to information in stores A, B, C, D, E

Access to information:	A	B	C	D	E
Rules and regulations accessible through the home page	yes	yes	yes	no (in 'About Us')	yes
Clearly stated and readable information regarding orders	yes	yes	yes	yes	yes
Clearly stated and readable information on return policy	yes	no	yes	yes	yes
Availability of the purchase cancellation form	yes	yes	yes	yes	Yes
Information regarding payment methods in product description	yes	yes	yes	yes	No
Information regarding shipping costs on product page	yes	yes	yes	yes	No
Contact information available on every sub-page.	yes	yes	yes	yes	No
Amount of product information and product variants	big	big	big	basic	Average
Information regarding sizes (and the measurement system)	yes	yes	yes	yes	No
Are the prices identical across all sales channels	yes	-	yes	no	Yes
Information regarding online stock	yes	no	yes	yes	Yes
Information regarding offline stock (at the physical store)	yes	-	yes	yes	Tak
Is the website encrypted	yes	yes	yes	yes	Yes
Privacy policy – information on personal data protection	yes	yes	yes	yes	Yes
Information regarding the status of the order once it has been placed	yes (full)	yes (full)	yes (full)	yes (basic)	yes (basic)

Source: Own elaboration.

Table 3 shows the analysis results for Stores A, B, C, D, E. Out of these, only A and C give their customers full access to basic information, which are the subject of this study. Store B's return policy is convoluted and difficult to understand and can't be accessed from the home page; instead, it is included in the store's rules and regulations section. Store B also lacks exact numbers representing the current stock status of their products; what it provides is only yes-or-no information on whether a given product is available. Store D does not provide access to its rules and regulations from the home

page, but it is available in the “About Us” sub-page. This store furnishes only the most basic descriptions of its products and their variants and there are discrepancies between the prices across the sales channels. Store E does not provide any information regarding the available payment methods at the level of the product sub-page; this information can only be accessed through the payment sub-page and only when an order is being placed; the same applies to delivery costs. Contact information of Store E is available only in the contact sub-page; it cannot be accessed through the home page or product sub-pages. In comparison to Stores A, B and C, Store E offers only a moderate amount of information regarding their products. For instance, it lacks any mention of the measurement system used in determining the sizes of the clothes it sells. As far as the information regarding the post-purchase status of an order is concerned, Stores A, B and C give their customers full access, namely, their customers receive status updates regarding their purchase via e-mail, as well as information on the delivery company handling their order; finally, the customers of these stores may track the subsequent stages of the execution of their order online. Stores D and E provide only basic information about the execution of an order – they send a notification once a product has been sent, which includes the bill of landing number and a link to shipment tracking system.

The trends observed in randomly selected clothing e-stores ranked 11 to 100 stand in striking contrast to those described above (Table 4). Store F does not provide any information regarding the return and complaint procedure and policy, neither does its website include a purchase withdrawal form. The store’s contact data figure only under the “contact” sub-page, and it cannot be accessed from any other place. Product descriptions are very basic – they are limited to sizes, materials and colours, and do not explain what measurement system was applied to determine said sizes. Further, similar to Stores H and I, the store operates only online. It also lacks any information on either privacy policy or personal data protection.

There is no section listing the rules and regulations in case of Store G, the information regarding delivery options and costs is unclear and convoluted, as well as difficult to find, and so is information on the store’s return and complaint policy. Also lacking is the purchase withdrawal form, and contact data is available only in the “contact” sub-page. Product descriptions are simplistic and cover the same range of information as those in Store F. No information is given pertaining to the status of online and offline stocks. The company’s website is not encrypted and it fails to furnish a description of its privacy policy, neither does it give any notification informing about changes in the order realisation status.

The website is not encrypted, it does not contain any information regarding the company’s privacy policy or the status of the order.

The product sub-pages in Store H do not provide information concerning payment methods or delivery costs, though these can be found in the rules and regulations section. Contact data is only available in the “contact” sub-page. Compared to the previously discussed stores, Store H furnishes an average amount of information regarding their products. No information as to the number of available products can be found on the store’s unencrypted website. The customers do not receive automatically generated notifications about a change in order status once they have made their purchase.

Table 4. Access to information in stores F, G, H, I, J

Access to information:	F	G	H	I	J
Rules and regulations available from the home page	yes	no (rules and regulations lacking)	yes	yes	yes
Clear and readable information about the delivery	yes	no	yes	yes	yes
Clear and readable information about the return policy	no	no	yes	yes	no
Availability of the purchase withdrawal form	no	no	yes	yes	no
Information regarding payment methods in product description	yes	no	no	no	no
Information regarding delivery costs on product page	yes	no	no	no	no
Contact data available on each subpage	no	no	no	yes	no
The amount of information about a product and its variants	basic	basic	average	full	basic
Information regarding measuring system used in determining sizes	no	yes	yes	no	no
Are product prices uniform across all sales channels	-	yes	-	-	no
Information about online stock status	yes	no	no	no	approximate
Information about offline stock status (in the brick-and-mortar)	-	no	-	-	No
Is the website encrypted	yes	no	no	yes	Yes
Privacy policy – information on personal data protection systems	no	no	yes	no	Yes
Notification about post-purchase change in status of the order	yes (full)	no	no	yes (after contact)	yes (from shipper)

Source: Own elaboration.

Similarly to Store H, Store I provides no information about the delivery costs and payment methods from the level of the product sub-page, neither does inform the customer about the measurement system used in determining sizes. Also missing is current stock status of any given product and information about personal data protection. The customer receives order status information once they have contacted the store.

Store J fails to describe the return and complaint policy in an unambiguous and easily comprehensible manner, further, it does not provide a purchase withdrawal

form. Product subpages lack any information regarding delivery costs and available payment methods, which may only be accessed through the “order and payment” sub-page or the rules and regulations section. Contact information may be found in the “About Us” sub-page and in the rules and regulations section. The measurement system used to determine the sizes of clothes is not included, and the current stock status is imprecise. There are discrepancies in the prices across the sales channels utilised by the store. The information regarding order realisation is limited, the customer receives nothing more than a notification from the delivery company concerning parcel tracking services and a tracking number.

SUMMARY AND CONCLUSIONS

New sales channels are rapidly developing due to the increasing number of potential customers with the Internet access, changes in their level of awareness and – more importantly – behaviour, as well as the growth of modern, multifaceted technologies and means of communication between businesses and their customers (Bask). Companies conducting sales through more traditional channels are becoming increasingly interested in joining the e-commerce sector, while those who are already operating online are looking into the opportunities that come with brick-and-mortar retailing. Information plays a crucial role in all of these sales channels and is an indispensable resource utilised in the decision-making processes in case of both customers and business owners. The expansion of the e-commerce sector alone poses an immense challenge for the logistics of information, but what is an even greater obstacle for businesses dealing in e-trade is finding the most effective means of reaching the customers and incentivising purchases. Online competition primarily consists in gaining a competitive advantage in terms of information. While creating product descriptions, e-businesses use words to convey information regarding the goods they sell. Hence, such descriptions need to be attractive to a potential customer. By analysing the clothing sector within e-commerce, we observe that many companies are moving away from blindly copying and pasting the descriptions provided by the manufacturer. This is a consequence of the fact that customers expect individual treatment and that a business owner is thus able to provide more information regarding a given product than their customer is capable of finding on their own. It is difficult to say unequivocally where the demarcation line between traditional marketing and logistics of information begins and ends. The ultimate goal of increasing the competitive advantage will be only achievable once marketing and logistics start functioning as a well-coordinated unit, which will translate into production of the required information, in the required space, time and amount, which in turn will incentivise purchases. The analysis presented herein proves that customers grade those stores that convey more individualised information higher, thus demonstrating the relationship between information and customer trust. Only Stores A and C have been shown to deliver full scope of information at every stage of a purchase, furthermore, all of them already have operational omnichannel strategies in place, whose primary goal is to integrate the flow of information from different sales channels.

In summary, information logistics is crucial in servicing online customers of clothing e-stores. These customers show greater appreciation for the stores that give them

full access to information regarding the products, orders, payments, deliveries, etc. It is thus justified to conclude that information logistics is an important component of building a competitive advantage on the e-commerce market.

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