

Facing Complexity in Online Marketing on Consumer Market

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ABSTRACT

The text focuses on the most important aspects of marketing complexity in the online consumer market, the knowledge of which is essential for the proper functioning of companies, consumer communities and markets. Marketing complexity is influenced by two opposite phenomena: The use of Internet-based communication translates into an increase of consumers' bargaining power in the relationships with companies, but at the same time there exist factors decreasing its influence, such as the possibility to monitor customers' behaviours through social media and far-reaching individualisation of communication, which contribute to increasing of the power of persuasion from the part of companies.

Keywords: Complexity, Online Marketing, Internet, Consumer, Product, Pricing, Communication

INTRODUCTION

According to American Marketing Association [2013], marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. In this paper, we adopt the definition of 'complexity' elaborated by Simon, which states that it is a feature of complex systems that are made up of a large number of parts that interact in a non-simple way [Simon 1962].

Up to date, both phenomena have been analysed separately, even though business practice reveals that they have a lot in common. Hence, it can be stated that there exists an important knowledge gap in terms of how those two phenomena correlate. The aim of this paper is to present to what extent complexity impacts marketing activities conducted in online consumer market.

The first part of the paper focuses on the online consumer market, perceived as a complex system, and the most important factors that influence its complexity. In the following part of the paper, online marketing instruments (perceived through the prism of traditional division of marketing activities) in the context of complexity will be discussed. The discussed marketing instruments are: product, communication, and pricing. The problem of online intermediaries (such as social networking services or price comparison websites), perceived as constituents of the fourth marketing instrument, will be addressed alongside the description of communication and pricing.

ONLINE CONSUMER MARKET AS A COMPLEX SYSTEM

Both markets and their sub-systems (companies, customer communities, etc.) may be perceived as complex systems, since they are characterised by the following systemic properties: openness (exchange of goods, information and capital with other entities), isolation from the environment (the possibility of designating the boundaries of a given entity); hierarchical subsystems; incomplete knowledge regarding their functioning, and emergence, i.e. the appearance of qualitatively new idiosyncratic features (such as a market standard, fashion or trend). Functioning of markets and their sub-systems come as a result of reciprocal interactions between their elements. Markets may maintain homeostasis or improve themselves by increasing the degree of organisation, i.e. by decreasing entropy (e.g. by limiting the information asymmetry). The functioning of markets and the companies that operate within them are often characterised by non-linearity and counter-intention, which stems from the complexity of internal and external relations in which they stand. An increase in the complexity may lead to deterministic chaos, i.e. system sensitivity to small modifications in the initial conditions [Skyttner 2006, Doligalski 2014].

The complexity of online consumer market derives from a number of mutually interacting factors, the most important of which include:

- large number of customers (Internet using consumers) and frequently occurring herding behaviours,
- impact of technological factors (ICT) on consumer behaviour,
- importance of relationships between consumers (horizontal market relationships) to business-to-consumer relationships in the process of acquisition and consumption of products / services (vertical relationships),
- market structure and market structure-resulting relationships between the companies

A large number of customers in the consumer market is a typical feature of both the traditional (off-line) and the online market. In the traditional market, a large number of customers, and at the same time the economic effects of competition, have translated into operating on large segments. The online market allows for individualisation of marketing activities (operating on smaller segments). From the point of view of system complexity, however, the influence that individual customers have on each other seems of particular importance. Nevertheless, the larger social groups are, the more difficult it becomes to predict such impact. The Internet removes physical limits of the market, promoting the globalisation of the economy. Nevertheless, one should remember that the online market processes are strongly conditioned by regional and national factors. One can state, just as it was pointed out by Kogut, that the Internet has borders (or, more precisely, that the Internet can be divided into particular areas) [Kogut, 2003]. The key local conditions are associated with:

- commercial solutions used in the traditional market
- regulations relating to the Internet
- socio-cultural determinants.

Hence, it can be said that there exists a number of contradictory trends in the scope of globalisation and in increasing the potential number of customers, with the simultaneous increase in the diversity of audiences in separate local markets. Both of these factors affect each other.

The use of ICT by consumers is another element that has opposite effects on the marketing activities management. The application of ICT leads to virtualisation of social and market relationships. The ongoing virtualisation process is the result of popularisation of social media (especially social networking) and the development of mobile technologies. The expansion of mobile technologies in marketing is perceived as the key factor shaping the relationships between consumers and companies [c.f. eMarketer, 2014]. Mobile technologies allow for far-reaching monitoring of customer behaviour, as well as for its analysis and prediction. Such actions are usually subject to business secret, nevertheless the studies conducted by González, Hidalgo, Barabási and Pentland show that such data may prove useful from the companies' point of view [Barabási 2005; González et al., 2008; Pentland 2009].

The use of ICT by consumers is dependent on several factors, such as:

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- attitude towards ICT - basic reason for which Poles do not use the Internet at home is the lack of such need (64.9% of responses among households without access to the network). The economic factors are of secondary importance [GUS 2012]. The main factor for not using smartphones is the lack of acknowledgement of their usefulness (preference for a regular phone - 46% of respondents surveyed, no need - 42%) [IAB Poland, April 2013].
- ability to use ICT - the declared and actual - a measure of the latter, for example, protecting privacy. Internet users generally admit the importance of privacy and security, but at the same time hardly care about their privacy, and do not frequently use free and widely available data protection tools [IAB Poland, June 2013].

As a result, consumers may be perceived as a factor that:

- increases the use of ICT in marketing, e.g. insufficient privacy protection of Internet users increases the possibility of profiling marketing activities;
- decreases the use of ICT in marketing, e.g. low popularity of applications for reading QR codes limits the use of this useful tool.

One of the factors that seems of particular importance and determines the complexity of the analysed market are the relationships between consumers. This factor has served as a basis for a number of business models (e.g. social networking services) and market strategies (e.g. the use of customer recommendation for building a brand or for sales purposes).

The influence of consumers' behaviours on the actions taken by companies is indisputable. The only controversy that can arise is how these behaviours should be interpreted. In this context, two contradictory visions, that are derived from assumptions about the functioning of consumers, may be identified:

1. A consumer that is rational, active, cognition-oriented and self-controllable (assumptions of classical economics and humanistic psychology)
2. A consumer that is irrational, to a limited extent cognitively active, vulnerable to persuasion and that may be influenced by companies (assumptions of behavioural economy and neuromarketing).

The resultant of these two positions is an approach to modelling customer behaviour in the economy, relying on the statement that customers are interacting, thoughtful (but perhaps not brilliant) agents. [Miller, Page, 2010].

The analysis of the complexity of the online consumer market should also include the problem of market structure. In Poland, market competition frequently takes form of perfect competition and oligopoly. According to the theory of economics, perfect competition takes place when there exists a large number of entities offering products at a low price, operating at zero economic profit. The state of perfect competition is typical for online stores offering popular products (such as household appliances, electronics, cosmetics). Perfect competition is characterised by easy market access for new players. Consequently, this means that perfect competition presents a high level of uncertainty associated, e.g. with the possibility of entry of a big player such as Amazon.com, which could lead to the failure of many online stores. The state of oligopoly, on the other hand, is a situation when the market is dominated by a limited number of companies that very often are interdependent, i.e. the actions taken by one company affect the other one. Such is the case of Internet portals, social networking websites or advertising networks. Entering an oligopoly market is more difficult, nevertheless still possible. Due to globalisation and cross-sectoral convergence, it becomes difficult to determine which company may be a potential competitor. MySpace lost users to the social networking site Facebook, which was originally addressed to the students of one university. Polish web portal WP.pl was bought by its competitor - o2.pl, a company whose main product for a long time were e-mail accounts.

PRODUCT

Online products and services often rely on the so-called network effect. The network effect refers to the phenomenon whereby the value of a product for a customer depends on the number of users of the product and, in particular, increases with the number of customers [Tellis et al., 2009]. The most significant example of the network effect can be provided by social networking websites. The value for customer offered by such websites does not stem from developed functionality, but is rather associated with customer base, or rather customer network.

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Therefore, the companies using social networking websites compete in such categories as the network size (number of users), network density (number of interactions between users) and network quality (quality of interaction between users). High quality of connections between users does not necessarily mean that there are long-term relations between them. The ties are rather weak and in line with expectations and social norms, such as the receipt of reliable information or product from an unknown entity, in accordance with the description of the transaction made at an online auction. In the case of customer networks oriented at information exchange, the phenomenon of network centralisation, i.e. presence of opinion-forming persons influencing other users, becomes of particular importance. Therefore, it can be stated that consumer networks increase significantly the complexity of a company's business model.

The above description does not apply only to a small number of companies that use the network effect in their products. The idea of customer network may be also applied in the case of online communities that review actions made by a company. Such a community may be gathered around the company's profile on a given social networking website. In other words, a customer community, which may be perceived as the company's asset, increases the complexity of the company business model and thus the risk. What is more, the community could turn against the company, and consequently turn into liability.

A phenomenon similar to the network effect is value co-creation. The notion of value co-creation refers to a situation where a customer (user) play an active role in the process of elaborating values for himself/herself as well as for other users. In the first case, the customer's actions rely on a widely perceived value proposition customisation, i.e. they are aimed at obtaining values that are adjusted to the customer's own needs and expectations (mass customisation). Kleemann and Günter note that mass customisation refers to the isolated activity of individual customers as directed toward one unit of the product, not to the collective activity of many individuals as directed toward a general product type [Kleemann, Günter, 2008].

Mass customisation can be seen as an attractive marketing concept, but, as some authors state, it may be quite difficult to implement [Salvador et al., 2009]. When allowing for product customisation, the company must ensure high quality of the product in a configuration chosen by the user. Moreover, the problem gets more complicated by the fact that the product components can be provided by different manufacturers. Contrarily to expectations, mass customisation did not gain high popularity, probably due to the excessive complexity of the process, both for the company and the customer (learning of the process of customisation, translating particular needs into product parameters, the risk of error in the customisation process, etc.).

It seems that value co-creation oriented at other users is a much more popular phenomenon. It includes publication of product reviews (e.g. on the websites of online stores), participation in interactions with other users (e.g. social networking websites) or product exchange (e.g. online auctions). In this case, customers frequently become an important element in the functioning of the entire project. Thus, the company becomes even more dependent on its customers. The migration of influential users to competitive portals may result in the migration of other customers and consequently weaken the position of the company. Research conducted by Tellis et al. shows that such changes frequently take place soon after previous periods of low customer migration [Tellis et al., 2009]. Again, the popular concept of the value co-creation community makes the company dependent on its customers, the behaviours of which may be of herding nature.

Some products become digitised. Digitisation means full or partial transition from material to digital form. Digitised products are characterised by high fixed costs (e.g. the cost of creating the software) and low variable costs (e.g. the cost of creating another copy), and thus are associated with high economies of scale. Consequently, product digitisation may lead to a situation where a given market becomes dominated by the manufacturers of the most popular products and the manufacturers of less popular goods are not able to remain competitive. On the one hand, a limited product choice translates into restricting value for customer, on the other, the oligopolistic market structure can lead to even greater dependence between competing companies.

MARKETING COMMUNICATION

The development of Internet has significantly facilitated the communication between the three parties: consumers communicate not only with companies, but also to a large extent with other consumers. Informal communication (between consumers) is a phenomenon that has always existed, but with the popularisation of the Internet it became

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much easier. Nevertheless, the question whether the development of the Internet has increased the importance of informal communication in the purchasing process still remains open. It is usually assumed that the development of the Internet has increased the importance of informal communication in the purchasing process, but it should be remembered that the importance of this (an other) types of information source depends on the frequency of use of the source and its credibility. Examination of these two factors is not an easy task. Researches based on the simplest methods (retrospective survey and respondents' declarations) are not able to verify the cost-effectiveness and the efficiency of consumers' actions, which are the aspects that combine consumer's activity (which is relatively easy to measure) with purposefulness (including consumer's competences, which are significantly more difficult to estimate).

Continuous research conducted by Nielsen reported that "recommendations from people I know, "brand websites" and "consumer opinions posted online" remain the most trusted sources of information (84 % of respondents in 2013 vs 78% in 2007). They are followed by "branded websites " (respectively 69% and 60%) and "consumer opinions posted online" (68 % in 2013 and 61 % in 2007). What is more, the respondents still trust other forms of advertising, especially in the traditional media, [Nielsen, 2013]. For many years, various studies have showed that "the people I know" are seen as the most reliable source of information. At the same time, however, the results differ in terms of percentage and the declared level of trust towards other sources of information. According to the Forrester Research, 70% percent of US online adults trust brand or product recommendations from friends and family and 46% trust consumer-written online reviews [Forrester Research, 2013]. The adjustment factor in the process of making purchasing decisions by consumers is trust to other people in general exhibited by the consumers. Poles are among the nations with very low levels of trust in other people [Boguszewski 2010] and exhibit the lowest levels of trust among all countries surveyed in Europe (the Scandinavians exhibit the highest level of trust). Only 23% of Poles believe that "most people can be trusted" [Civipedia, 2006]. There is doubt whether, in such event, the impact of some consumers on others is not overrated for such sources of information as "consumer opinions posted online."

As it was already mentioned, putting trust in a given source of information does not necessarily mean that the said source should be perceived in terms of usefulness. In this case, two conditions must be met: trust in information source and information source competences. Trust in people known to the consumer - other consumers - will not prove useful in a number of situations, e.g. when the consumer has to make a purchase that requires expert knowledge, such as the purchase of advanced services (e.g. financial services) and products (cars, home electronics). The purchase process of such products is made based on rational arguments. In this situation, customers choose a product based on formal (controlled by the company, but competent) and informal sources of information (independent, but less competent). They verify the credibility of formal sources by comparing the information they provide [Wójcik, Doligalski, 2011]. But the more they apply the formal sources, the more they use informal sources of information about the product [Wójcik, 2009]. Consumers communicate with each other in order to reduce uncertainty about the companies and their products, which should lead to making more relevant (more rational in economic terms) decisions. Therefore it can be assumed that in the case of purchases based on rational arguments, the role of advertising does not become less important. That is why, advertisers are increasingly willing to employ its more advanced forms, such as RTB (real time bidding) [eMarketer, 2012, 2013] or targeted behaviourally advertising [Beales, 2009], which have been developed based on the possibility of monitoring consumer behaviour and improved customer information processing. Such solutions enable mass customisation of commercial messages in the B2C market. Hence, it can be stated that the implementation of "1 to 1" marketing programmes has never been so widespread as it is right now [Peppers, Rogers, 1997]. The behavioural approach has been also adopted by particular stores (e.g. the use of data from individual customer accounts and cookies) as well as other companies. Adoption of such a direction should be perceived as a natural evolution of CRM systems.

Faced with the gradually developing persuasion methods, customers tend to more frequently engage in interactions with each other in order to verify the advertising messages. In order to make such verification successful, two conditions must be met:

1. The consumer must be cognitively active, as well as willing and able to process the information furnished by other users.
2. Other customers must furnish valuable (useful from the perspective of purchase decision making) information.

Information overload to which the Internet users are exposed, leading to cognitive overload, translates into increasing frequency of use of heuristics, such as social proof [Cialdini, 1999]. Inclusion of the "like" buttons in the websites or fanpages are a common manifestations of the use of such mechanisms. The influence of such proofs depends e.g. on the evaluation of the sender's intentions (consumers clicking the "like" button, writing product

reviews, etc.). As it has been already mentioned above, the level of trust put by consumers in such opinions remains very high [Nielsen, 2013]. Such intentions are probably perceived as clean, hence providing ground for persuasion. It should be noted, however, that following the opinions of other people may be perceived as a manifestation of superficial information processing. Wojciszke and Doliński note that the reactions of fellow receivers should be interpreted as signals of succumbing during the process of peripheral data processing [Wojciszke, Doliński, 2008]. Hence, it may be seen as a pull factor for companies. Moreover, advertisers create "fan farms", increase the number of fans by rewarding them for simply being a fan, manipulate reviews (c.f. amplifying). In addition, companies can use the tools for monitoring informal communication, including both online search engines and complex tools for monitoring of discussions, also those taking place on social networking websites, i.e. portals which normally cannot be monitored by traditional search engines. Hence, companies gain a possibility to increase the impact of their persuasive messages in a concealed manner. Such actions are not filtrated through active and deep data processing. In addition, involvement in the process of information search and choice of information sources increases the illusion of customer's control over this process [Zielonka, 2004].

It is also important to assess the importance of the latter factor, i.e. the evaluation of information furnished by other consumers. The consumer is able to formulate general judgements without being able to identify specific assessments in the evaluation of the quality of the product in relation to its price. Moreover, the value of information provided by the consumer to a large extent depends on the motivation of customers advising other consumers. Motivation can be categorised as follows [Thorsten Hennig-Thurau et al., 2004]:

1. desire to help other users in making purchasing decisions - altruism
2. desire to help the company - equity theory
3. social benefits - the need to belong to a group
4. "taking of power over the company" – this applies particularly to negative reviews
5. self-enhancement
6. economic benefits - informal and formal
7. the expression of positive emotions / ability to channel negative feelings - balance theory

None of the types of motivations described above clearly indicates the actual value of the information posted by customers online. During the purchasing process, the customer would have to assess the credibility of other customers perceived as sources of information, which would require a certain cognitive involvement – the effort which in the first place was to be minimised through the involvement of other consumers. Therefore, in this case it seems that product popularity (which is also a manifestation of social proof), perceived as a proof of its value (since it was verified by other consumers), seems of prevailing importance.

PRICING

In the case of products sold online, the dependence between the price level and the seller's reputation seems of particular importance. There is a positive correlation between the reputation of the seller, e.g. an online store or vendors on an auction portal, and the price the customers are willing to pay for a product [Obloj, Capron, 2011]. Internet reputation systems are often used by intermediaries, such as online auction websites or price comparison engines. Quite frequently, the majority of opinions procured by reputation systems is good or very good. One could assume that such situation is very favourable for the sellers, since it translates into an increased credibility, etc. In practice, however, it means that even a small number of negative ratings can significantly reduce the overall evaluation of the company, which is usually calculated based on the average of the ratings. A company willing to compete by means of such systems must in the first place minimise the percentage of dissatisfied customers, since it is them who, through negative comments, to the greatest extent may impact the company's reputation. Hence, we witness a situation where the positive evaluation is beneficial for the company, but at the same time makes it extremely sensitive to changes. Thus, there exists a non-linearity typical for complex systems, which in extreme cases can lead to fundamental changes in the system (leaving customers, bankruptcy).

Some online intermediaries offer the so-called dynamic price discrimination. In other words, the level of prices is automatically fixed based on various parameters, including the number of available products, popularity among customers, the amount of time for using the offer or the price of products offered by competitors. Hence, dynamic price discrimination allows for vending the products at a price slightly lower than the competitors or for increasing the price, when the number of available products drops. The use of dynamic price differentiation contributes to

enhancing the adjustment processes in the markets, and greater unpredictability of the price level. The phenomenon can be illustrated by the price of a used book offered by two sellers on Amazon.com, which reached a level of over \$ 23 million [Eisen, 2011]. The high level of price was probably due to a bilateral setting of prices above the price of a competitor. In this way, the price of the book grew with each iteration of the price fixing process. Therefore, automatic pricing increases the company's dependence on third parties, in extreme cases contributing to the deterministic chaos.

CONCLUSIONS

Efficient online marketing requires a complex and holistic approach to the management of the company's actions, especially in the consumer market (in B2C environment), since it is controlled by contradictory trends that cause a large uncertainty of managers. Consumers are a factor that can quickly destabilise the position of the company. Predicting consumer behaviour is difficult, particularly in those areas of marketing activities (e.g. communications) where the relations between various market factors are highly complicated.

The constantly strengthening position of the consumers results from new ways of communication and information finding, owing to which consumers may choose a provider that offers the most appropriate value proposition. One can observe that there is an increase in the bargaining power of the consumer in the relationship with the company (due among others, to communication via social media), but at the same time that there exist factors that diminish their role, e.g. the possibility to monitor customers' behaviour in social media and far-reaching individualisation of communication which relies on the analysis of prior purchasing behaviours of consumers, that translate into increasing the powers of persuasion on the part of the company. The increasing ease of discussion monitoring allows for emerging trends identification and, in the case of a negative development of the discussions, for taking preventive measures. It seems reasonable to ask what may be the possible result of those two effect opposing each other. It is difficult to determine, but it can be assumed that it will contribute to the acceleration of market changes in the scope of participation of individual companies in the market or even their survival.

The problem of complexity traces into product policies. The position of a product in online trading is influenced, among others, by the network effect, value co-creation or digitisation. These phenomena increase herd behaviours among Internet users. These on their part may lead to irrational choices, market concentration and its rapid transformations, following periods of relative stability.

Online reputation systems give Internet users possibility to choose stores that offer a desired combination of reputation and price. High and almost equal levels of reputation displayed by many shops mean that they become extremely sensitive to single negative assessments from the part of dissatisfied customers. Dynamic price discrimination systems, offered by some intermediaries, give sellers a possibility to fix the pricing depending on the prices offered by competitors, which significantly increases the interdependence in the market, thus building its complexity.

Further research may focus on the impact of complexity on the company's profitability and other success determinants, such as the company's ability to engage in long-term customer relationships. The study of models of using complexity and the opposite phenomenon – simplicity – in companies may be a particularly promising research pathway. Finally, customers' inclination to choose solutions characterised by complexity in various market context seems also of particular importance.

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