

Contemporary Customer as A Dynamic Factor in Product Innovative Processes

Wioletta WEREDA

Institute of Organization and Management, Military University of Technology
2 Gen. Sylwestra Kaliskiego St., 00-908 Warszawa, Poland
weredawioletta@tlen.pl

Jacek WOZNIAK

Institute of Organization and Management, Military University of Technology
2 Gen. Sylwestra Kaliskiego St., 00-908 Warszawa, Poland
jacek.j.wozniak@wat.edu.pl

Abstract. *The issue of including clients of contemporary enterprises in innovative processes (in the area of product innovations) has been discussed in the study. The aim of the study is to identify the basic attributes of modern clients purchasing innovative goods and participating in innovative processes, as well as to determine the role and importance of contemporary customers in innovative processes. In the implementation of empirical research on a sample of 100 innovative enterprises from Poland, the k-means method was used to identify basic clusters of enterprises specified in terms of their clients' behavior. The results of the study indicate that in the sample of enterprises there are two leading clusters: (1) "traditional customers looking at the price" and (2) "digital/global customers looking for quality". It is important that both groups of enterprises, although having different attributes (behaviors in sales processes) of clients, should engage these clients in innovative processes, only using different "principles".*

Keywords. *contemporary customer; customer relationships; contemporary enterprise; ICTs; innovative process.*

Introduction

The efficient and effective functioning of contemporary enterprises requires not only the engagement of resources of the expected value but also establishing lasting relationships with key stakeholders. The basic axis of a modern enterprise's activity on the market should be (but it does not always have to be this way) innovative processes which are the basis for creating value for both customers and the enterprise itself and other groups of stakeholders. Due to the fact that innovative processes (in the area of product innovations) are in a sense "subordinated" to the client (his/her needs, requirements, possibilities and limitations), it is worth considering including (also permanently) clients in innovative processes. Such an approach may, to some extent, increase the broadly understood quality of innovative processes and increase customer involvement and the durability of their "attachment" to the enterprise and brand (Wereda, 2018).

The main goal of the study is to identify the basic attributes of today's customers purchasing innovative goods and participating in innovative processes (in the area of product innovations), as well as to determine the role and importance of contemporary customers in product innovative processes. The research problem is: *Why should modern customers be involved in innovation processes and on what terms should this be done, and why clients need to be involved in innovative processes?* The article assumes that clients are to some extent "dynamic" and "unstable" resources of modern enterprises. The empirical research is aimed at specifying the role and significance of modern customers in the implementation of innovative processes. This is mainly due to the fact that modern customers are demanding to the offer of enterprises, and are also focused on the use of ICTs and establishing active, two-way relations with sellers. The empirical research can be a source of creating the so-called best practices for innovative enterprises to shape valuable relationships with stakeholders.

Literature review

Customer as a dynamic resource of an enterprise

According to many studies, the changing role of information and communication technologies in marketing poses a substantial challenge to both marketing managers and customers (Vassileva, 2017, p.55). What is more, contemporary clients should experience many types of innovations because they do not want to be bored and are encouraged by changes. Hurley and Hult (1998, pp.42-50) described that innovativeness refers to an enterprise's ability to rapidly develop and execute new ideas and products as well as force customers to quick interactions. Continuing, Sawhney, Wolcott, and Arroniz (2006) argued that innovativeness has been the new essential value created for customers from a corporate perspective and described that the creativity can be incorporated into some facets of the enterprise's management. The very important fact is that there is a relationship between customer engagement in the shopping process and clients' traits. That is why, customer engagement refers to the psychological state of customers when participating in the experience interaction process (Brodie, Hollebeek, Jurić, & Ilić, 2011). Due to many studies, known attributes of the clients are connected with the type of generation (Marston, 2005; Cielemeński & Wereda, 2018): (1) mature, (2) baby boomers, (3) generation X, (4) generation Y, as well as (5) generation A.

As it was mentioned before, technological progress and IT development have made a lot of changes in customers' behavior. For example, the representatives of the generation named Z and Alfa have appeared on the labor as well the customer market, representing new reality, including that in the virtual and electronic dimensions. Generally, a massive impact of the digital economy is that customers are constantly connected; anytime, anywhere, anyhow. Each client has a continual ability to interact with friends, family, peers, teams, suppliers or other customers during choosing, selecting or purchasing a product or service (Wereda & Woźniak, 2019). What is more, this is the base of Customer 4.0, the fourth generation of e-commerce, led by younger and highly influential generations, where the customer is truly in control (Freeman, 2017). Below there is a description of former generations of the client (Freeman, 2017):

1. Customer 1.0 (before the 1950s)–customers benefited from the production or delivery capability of the business. They had little choice, and mostly bought products that were available on the market at that time;
2. Customer 2.0 (1950–1990)–the principles of Customer 1.0 were still alive, supported by the development of consumerism and traditional marketing. The concepts of the brand first emerge, and customer demand for products and services were strongly driven by marketing;
3. Customer 3.0 (1990–2015)–the principles of Customer 1.0 and 2.0 continue but expanded by the explosion of globalization and the Internet. Customer retention and loyalty are key features, and the focus of competitive action is on delivering the best possible customer experience.

According to many researchers Customer 4.0 (2015+) is a person whose principles (based on experiences of Customer 1.0, 2.0 and 3.0) continue to evolve, but are now complicated by vast choices, online platforms and has emerged as a new type of customer: One whose personal goals outweigh persuasive marketing. One who seeks to influence and be influenced by other customers. One who employs very new ways of working and thinking; who has a high expectation that a provider will change the way they deliver to fit with their needs. Where the customer's journey is their unique journey, where businesses play a part in enabling them to achieve their goals. This customer is a netizen, very demanding, highly informed by electronic devices and looking for developing, competitive and innovative approaches to different challenges on various spheres such as banking, professional services, automotive and IT services, healthcare, education, (most aspects of) manufacturing and construction, etc. (Freeman 2017; Kotler, Kartajaya, & Setiawan, 2017; Wereda & Woźniak, 2019). What is more, from a managerial perspective, retailers have created many efforts to increase purchases by encouraging customers to engage with their mobile phones while shopping, for example by adding quick-response codes that give consumers access to useful information through their mobile phones or making Wi-Fi readily available (Grewal, Ahlborn, Beitelspacher, Noble, & Nordfalt. 2018, p.103).

Describing the contemporary client, it should be stated that most of them using the Internet and social media for information and fun, expect and evaluate positively every emotional personal experience which they get as a result from their interactions with different enterprises and service providers (Vassileva, 2017, p.55). Generally, the contemporary client is a mobile co-creator of the value that promotes a brand to which is loyal and also an advocate on the market. Due to literature customer value co-creation is a value

creation process used to establish satisfactory experiences through the exchange of knowledge and skills between customers and companies, including active customer behavior in physical, virtual, and mental processes (Tynan, McKechnie, & Chhuon, 2010; Shamim, Ghazali, & Albinsson, 2016).

Summarizing it should be noted that contemporary customers are more aware of the risk on the market, they are very mobile, looking for innovations of the products and services, they demand the quality and reasonable price. Shortly, enterprises should pay attention to such interventions areas in building relationships with contemporary customers (Vassileva, 2017, p.55):

1. WHO: digital consumers, Millennials, "old" folks;
2. WHAT: information, added value, smart offers;
3. WHEN: 24h/7 days, real-time;
4. WHERE: cloud, mobile devices, social media;
5. WHY: emotional and personal experience, changing motivation, co-creation of the value, looking for innovations;
6. HOW: analytics, interactivity, being mobile all the time.

Therefore, contemporary customers should be treated as an important factor in value creation processes—both for the enterprise and the customers themselves. Therefore, it is worth paying attention to the issue of engaging clients in innovative processes.

Customer in the innovative processes

Innovations in contemporary enterprises require the integration of various resources, often unavailable in a given location. It is necessary to search for resources with the desired market value and thus create value chains in innovative processes on a global scale (Pakulska & Poniatowska-Jaksch, 2009, pp.69-77, 2015, pp.132-144; Weresa, 2008, p.10 et seq.). The behavior and thinking of people who want to participate in creating innovation is also changing (Karliński & Rudolf, 2009, pp.6-9; Bombol, 2018, p.63 et seq.)—this situation is particularly often observed in modern industries and sectors, where the customer basically actively participates in the innovation process from the moment of placing the order until receiving the results. Therefore, modern enterprises not only have to meet the client's conceptual requirements but also to acquire the resources they expect. In enterprises, the creation of innovations (goods) of highly individualized (commissioned) increasingly takes place, rather than the creation of standard goods directed at a wide group of consumers. The key here is the increase in customer value, which is the basis for creating the value of a creative enterprise (Fig. 1).

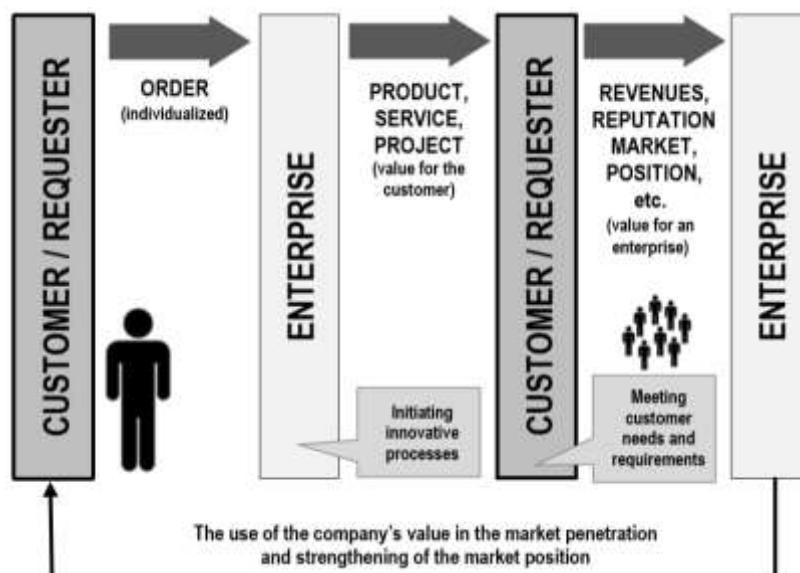


Figure 1. *Customer in an innovative process*
(Woźniak, 2019)

Along with the development of internet technologies, innovative processes in modern enterprises can draw on the potential of sharing economy. Intangible resources, which are carriers of value made available by external entities, gain particular significance here (Pakulska, 2017, pp.48-52). In modern and innovative

sectors, these types of resources are the basis of innovative processes and determine the efficiency felt by both the client and the company creating the given innovation. Sharing economy mechanisms enable cost reduction in innovative processes, and also limit market, financial and operational risk—becoming the starting point for increasing the value for the company's stakeholders and strengthening its market position (Muñoz & Cohen, 2018; Apte & Davis, 2019; Frey, Trenz, & Veit, 2019).

Nowadays, the following changes can be observed in the implementation of innovative processes in modern enterprises (Bartkowiak & Wachowiak, 2016, p.81):

1. The entrepreneur is able to provide innovation, "consumption" of which can be both by individuals and mass;
2. There may be a wide involvement of clients in creating innovation, not only in the aspect of collecting ideas and requirements but also actively participating in the provision of the service, e.g. partial design and provision of knowledge resources, etc.—this can be called "extended prosumption" (production and consumption).

A contemporary approach to developing, implementing and commercializing innovation by enterprises—by increasing, among others their level of uniqueness—results in increased costs of innovative processes. Enterprises, wanting to counteract the reduction of the effectiveness of innovative processes and the appearance of certain risk factors (including in the area of competence of creative employees and customer relations), are increasingly focusing on the implementation of business strategies related to the standardization of innovative processes.

Particular attention in innovation processes deserves a risk referring to customer behavior (see: Kasiewicz & Urban, 2009, pp.95-97), including in the context of creating value for various classes of stakeholders. Customer activity may also determine the level of effectiveness of activities, including by shaping the costs of innovative activities and planning the time and scope of work (see: Wyrozębski, 2016, p.82 et seq.).

To sum up, it should be emphasized that the modern customer plays a key role in innovation processes, including while being a source and a carrier of value for the enterprise itself as well as various classes of stakeholders. The client, being a source of creativity and knowledge about the real needs of the market, should be "activated" in a structured, purposeful and effective way in innovative processes. Thanks to this, the client will be able to be seen as a resource that is the source of opportunity factors, not just threats.

Methodology

Objectives and research questions

The main purpose of the article is to identify the basic attributes of modern customers purchasing innovative goods and participating in innovative processes, as well as to determine the role and importance of contemporary customers in innovative processes. The research problem is: *For what purpose should modern clients be involved in innovation processes and on what principles should it be carried out, and why clients need to be included in innovative processes?* The study poses three research questions:

- RQ 1. *What are the attributes of contemporary customers purchasing innovative goods and participating in innovative processes?*
- RQ 2. *Can a modern customer be treated as a dynamic resource that determines the specificity of innovative processes in an enterprise?*
- RQ 3. *Do the attributes of modern innovative enterprises provide the basis for developing the scale and scope of customer relationships?*

Research methods and research sample

The empirical study was conducted using the method of Computer-Assisted Telephone Interviewing on a sample of 100 innovative companies listed on the *NewConnect* market in Poland (25.3% of entities from the population—a population of 396 companies from Poland). The respondents were owners or managers mainly responsible for shaping relations with stakeholders as well as for communication processes and innovations. One respondent from each enterprise was qualified for the study. Systematic random selection in layers was used in the study. The layers were enterprise classes in terms of the number of employees (small, medium, large). Entities were randomly selected in proportion to their number in the population

(on the *NewConnect* market). It is worth adding here that the highest number of respondents was the highest management level (52% of enterprises), while at the medium and lowest level a similar number of respondents was recorded (23 and 25% respectively) (Fig. 2).

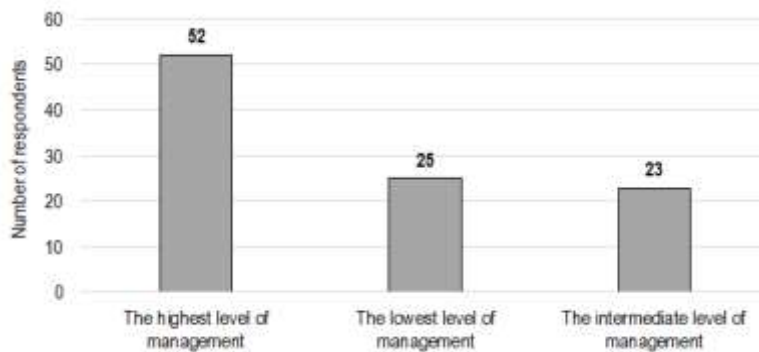


Figure 2. Respondent's position in an enterprise ($N=100$)

The empirical study was conducted in the period June–July 2018 and covered the entire country (16 provinces in Poland). The results of the k -th question ($k=1...11$) given by the n th respondent ($N=1...100$) were subjected to statistical analysis— k -means method. Respondents on a 5-point scale assessed the level of fulfillment by the clients of a given enterprise of certain attributes of modern clients—specified on the basis of literature on the subject query (Table 1). The calculations were carried out using the IBM SPSS Statistics 24 software (PS IMAGO 4.0). The study also employed a method of critically analyzing literature, methods of analysis, synthesis and induction.

The leading empirical method was the k -means analysis. This method belongs to the division methods of cluster analysis and consists in dividing the entire set of objects (in the case of the described empirical study—innovative enterprises) into groups of similar objects in accordance with the principle of maximizing variance between individual clusters while minimizing variance within the studied clusters (Pietrzykowski & Kobus, 2006, p.302; Kajstura, 2019) (Fig. 2).

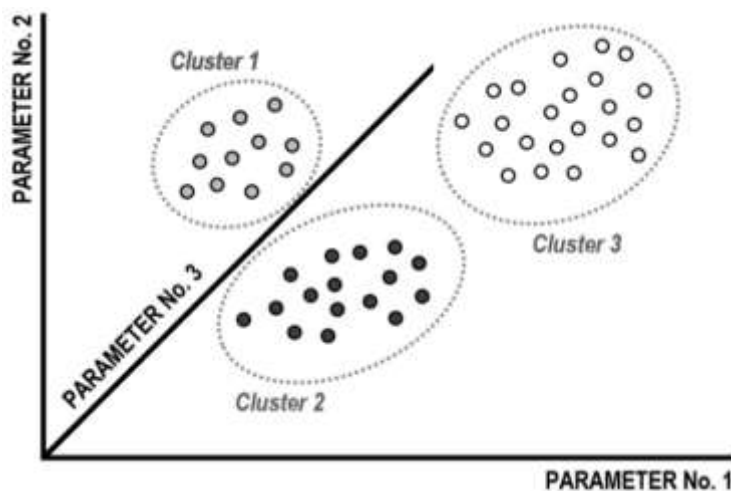


Figure 3. Combining enterprises in clusters using the k -means algorithm (own elaboration based on: Sebestyen, 1962)

The k -means method was proposed by T. Dalenius in the 1950s. However, the authorship of the k -means method is attributed to J. McQueen (1967). This method belongs to the group of optimization and iterative methods and is used to analyze large data sets—because it aims to reduce a large amount of information collected to several basic categories. This makes it much easier to understand the studied phenomena and specifications of simplified, more general conclusions. The k -means method provides the basis for the specification of a specific typology of objects, as well as allows the identification of systematic factors/attributes for the examined objects (in the case of the empirical study described) and cause-effect relationships between the examined objects and their attributes (Pietrzykowski & Kobus, 2006, p.302).

In the study, the *k*-means method was used in the following stages (based on Hartigan & Wong, 1979; StatSoft, 2006; Kajstura, 2019):

1. Determination of the number of clusters—the study used the Hierarchical Cluster Analysis–agglomerative method (tree diagram, Ward method, Euclidean distance)—2 clusters were separated;
2. Specification of the metric (Euclidean distance was included in the study) and initial division of the set into clusters (determination of initial cluster centers) based on the arbitrary allocation of objects to groups;
3. Calculation of new cluster measures;
4. The use of the algorithm until the division of objects is obtained in which the most significant results of the analysis of variance were achieved (9 iterations of the algorithm were carried out).

Detailed results of an empirical analysis using the above methods are presented in the further part of the study.

Results of the empirical research

The empirical study referred to the description of the modern customer using 11 basic attributes of his/her behavior on the market (based on Bailey, Baines, Wilson, & Clark, 2009; Gołąb-Andrzejak & Gębarowski, 2018; Varnali, 2019). These attributes mainly refer to the needs and requirements of modern customers, as well as their approach to shaping relationships with sellers (Table 1). It is worth noting that the indicated attributes of the modern customer do not cover the complexity of this issue, especially from a global perspective. It is worth remembering, however, that individual attributes in a cumulative and quite a general way refer only to the basic features of clients operating in modern markets and create a relatively coherent and complete set of attributes. Additional specification of the attributes indicated in Table 1 could result in excessive multiplication and "blur" in the subject of further analysis.

Based on the respondents' assessments (on a 5-point scale) regarding the behavior of their company's clients, enterprises were divided into classes/clusters—in terms of the specificity and problem scope of their clients' activities in relation to the enterprise/seller ($N=100$). For this purpose, cluster analysis using the *k*-means method (including variable standardization) was used. There are two clusters in which the following types of customer activity dominate:

1. Cluster No. 1: "traditional customers looking at the price"—customers with a high perception of their value and uniqueness, variable, unstable, emotional in assessing the behavior of the seller, looking at the price of the product ($N=48$);
2. Cluster No. 2: "digital/global customers looking for quality"—customers that have electronic purchasing preferences, country boundaries are not an obstacle to them, expect seller's support, are rational and attentive to quality and a wide range of product choices, are also impatient ($N=52$).

Table 1. The leading attributes of contemporary customers

Attributes of customers	Cluster	
	1	2
Customer wants to be treated respectfully and individually and expects the seller a high personal culture	0.18504	-0.17081
Customer presents a demanding attitude and knows his/her purchasing opportunities (is a global customer)	-0.27054	0.24973
Customer rarely buys the same product/service, because it compares the prices, is demanding and grumpy	0.20328	-0.18764
Customer replaces suppliers and brands of products fairly quickly if it finds more favorable prices, and is looking for discounts and sales opportunities	0.42234	-0.38985
Customer draws attention to the quality of products/services and has a lot of knowledge about products and services	-0.32116	0.29646
Customer has an access to extensive information and often retains the position of the "stupid wise" person, and shows limited trust to retailers	0.34378	-0.31734
Most customers are undecided people, but want to have a large selection of purchases and are looking for individual benefits and added value with every purchase	-0.15881	0.14660
Customer expects solid and honest advice and feedback on the product/service, as it does not buy lightly and compares products	-0.16409	0.15147
Customer has a lot of sales experience and everything is analyzed before purchase, therefore customer is not loyal to products/services and brands of companies	-0.13029	0.12027
Customer is impatient during the purchase and often quickly gets into aggression	-0.47939	0.44251
Customer prefers electronic purchases	-0.22003	0.20310

At this point, it should be noted that the first cluster is basically created by companies that have customers who have a "traditional" approach in relation to sellers. It can, therefore, be assumed in a simplification that the „traditional" approach—despite the strong customer focus on the use of modern ICT in purchasing processes on a global scale (see: Husain, Al-Tameem, & Gautam, 2013)—is still important and popular. You can indicate here even the increasing customer class "50+" or even "60+" (Шерешева, Калмыкова, Валитова, & Березка, 2017).

It is also worth noting here that in principle both clusters are equal—48 and 52 enterprises, respectively. Therefore, the second cluster—characterized by having clients showing a typically "modern/digital" approach in relations with sellers—has a similar meaning in the sample of enterprises studied. Thus, it can be assumed that not all modern customers need to be focused on the use of digital technologies. Moreover, the scale and scope of application of these technologies depend on the possibilities offered by the enterprise to its clients. If customers cannot make extensive use of the potential of ICT in relation to the enterprise/salesman, then in the opinion of entrepreneurs these customers are not oriented towards modern ICT. Therefore, in the context of the empirical study carried out, it should be noted that nearly 95% of the surveyed entities declared that they use ICT in contacts with stakeholders, including clients. Therefore, it can be assumed that among the companies forming the cluster No. 1 ("traditional"), most use ICT in dealing with clients. Therefore, the "traditional" approach of customers does not result from the "technological limitations" of the company/seller.

The leading attributes of the surveyed enterprises are presented in Table 2. In turn, Table 3 contains the predominant attributes for each cluster. It is worth noting here that (Table 2):

- the survey was dominated by small enterprises, wherein principle innovative processes are implemented in a "natural" and flexible way, with the possibility of high customer involvement (it is easier to apply prosumerity throughout the entire innovation process, from identifying market needs to implementing innovations and evaluating its market efficiency);
- the research was dominated by entities operating at least 11 years on the market—thanks to which it was possible to obtain relatively reliable information on the implementation of innovative processes and shaping customer relationships by these enterprises; it can be assumed that the entities surveyed have a relatively well-established market position and successfully conduct innovative activities and have a developed network of relations with external stakeholders;
- the potential to implement innovative processes is confirmed by the operation of most of the surveyed enterprises on an international, European and national scale; thus, enterprises can draw on the potential of innovation in network/virtual structures and in line with the open innovation model; thus, the surveyed entities can draw on the potential (creativity, financing) of clients from various regions of the world, which is a huge "pool" (cheap/free) of innovation potential; it is also worth noting here that these enterprises also have the opportunity to meet the requirements of glocalization, i.e. adaptation of created and implemented global innovations to the needs, requirements and capabilities of local communities, which today is a great source of value for customers;
- the survey was dominated by enterprises with annual revenues not exceeding EUR 2.28 million, which indicates that innovation processes are not heavily funded by enterprises; this results in the need to reach for the easily available and relatively cheap (and sometimes free) potential of customers and other external stakeholders.

Based on the above observations resulting from the specifics and structure of the research sample (Table 2), it can be assumed that the surveyed enterprises are oriented on the implementation and development of innovative processes. These are mainly entities with limited funding possibilities for innovative processes of small size, operating internationally (on various national markets). Thus, it can be assumed that in innovative processes, surveyed enterprises are "forced" to use the "scale effect" and virtualization of business processes (including innovative). What is more, taking into account their business profile, they are strongly focused on the implementation of innovative processes in close interaction with clients—they provide services or conduct production in industries requiring advanced knowledge (know-how) or in dynamically evolving industries (both on a local scale and global). The lack of "agreement" with clients, as well as the failure to meet their needs, may result in their loss (Bachmann & Morton Jr., 2013; Tayur, 2013; Sofi & Hakim, 2018). To meet this goal, enterprises should be aware of the attributes of modern clients and use these attributes in the preparation and implementation of innovative processes, obtaining information about these clients (Zalewska-Turzyńska, 2017). Without it, including the client in innovative processes may prove ineffective and ineffective and may become a source of specific risk factors.

Considering the results of the empirical study, it can be seen that the surveyed enterprises have two main classes of "modern" customers: (1) traditional customers looking at the price, as well as (2) digital/global customers looking for quality (Table 1). It should be emphasized, however, that despite the attribute of "traditionalism", the first of the indicated customer classes should also be considered as "modern". This is due to, among others:

1. clients in this class carry out market and information analysis—they simply "absorbed" all market information;
2. clients belonging to this class partly use modern ICTs in contacts with the enterprise (but not on such a large scale as in the second class of enterprises), as well as in analyzing data and information;
3. These customers are focused on maintaining value from the supplier/seller, not just buying at the lowest price.

Table 2. The leading attributes of the surveyed enterprises

Attributes of enterprises		Cluster		Total
		"Traditional customers looking at the price"	"Digital/global customers looking for quality"	
Size	Small	20	20	40
	Medium	11	20	31
	Big	17	12	29
Age	Up to 11 years	1	2	3
	11-20 years	20	22	42
	21-30 years	24	24	48
	Over 30 years	3	4	7
Scale of operation	Local (1 town/city/district)	3	3	6
	Regional (1-8 voivodeships in Poland)	0	1	1
	Domestic (9-16 voivodeships in Poland)	12	12	24
	European (min. 1 country in Europe outside of Poland)	19	19	38
	International (min. 1 country in the world outside Europe—including outside of Poland)	14	17	31
Annual revenues ¹	<0-10) mln PLN = <0-2.28) mln EUR	18	19	37
	<10-20) mln PLN = <2.28-4.56) mln EUR	10	7	17
	<20-30) mln PLN = <4.56-6.83) mln EUR	4	5	9
	<30-50) mln PLN = <6.83-11.39) mln EUR	1	7	8
	<50-100) mln PLN = <11.39-22.78) mln EUR	5	6	11
	Over 100 mln PLN = over 22.78mln EUR	10	8	18
Profile of operation	Construction	2	6	8
	E-commerce	2	3	5
	Eco-energy	5	10	15
	Commerce	2	3	5
	IT	5	3	8
	Eco-production	3	2	5
	Media	6	1	7
	Property	0	2	2
	Health	4	4	8
	Recycling	1	2	3
	New technologies	3	4	7
	Telecommunications	2	1	3
	Financial services	7	9	16
	Leisure and tourism	3	2	5
	Clothing/fashion industry	3	0	3
Total		48	52	100

The term "traditional" in this case means a kind of conservatism in taking into account the price of products and services and a tendency to constantly analyze the offer of enterprises and paying attention to "rationality" in the purchasing process.

¹ According to EURO exchange rate from 01.07.2018 (1 EUR=4.3899PLN).

Table 3. *The predominant attributes for each cluster*

Predominant attributes	Cluster	
	No. 1: "Traditional customers looking at the price"	No. 2: "Digital/global customers looking for quality"
Size	Small	Small Medium
Age	11-20 years 21-30 years	
Scale of operation	European	European International
Annual revenues	<0-2.28) mln EUR <2.28-4.56) mln EUR Over 22.78 mln EUR	<0-2.28) mln EUR
Profile of operation	Media Financial services Eco-energy IT	Eco-energy Financial services

In the case of both enterprise clusters, due to the formation of customer relationships, a similar structure of attributes of these enterprises can be observed (Table 3). For example:

- in both clusters, small and market mature (in terms of age) enterprises are dominating, operating on a European scale;
- both in the first and second cluster are dominated by entities with a similar activity profile, i.e. those dealing in the provision of financial services and eco-energy;
- enterprises with average annual revenues below EUR 2.28 million prevail in both clusters.

It is worth noting, however, that in cluster No. 1 ("traditional customers looking at the price") entities with higher average annual revenues (above EUR 2.28 million) have relatively large significance. A greater diversity of the leading profiles of the subject activities (media, IT) is also visible. In turn, in cluster No. 2 ("digital/global customers looking for quality"), not only small but also medium-sized enterprises are important, and processes are carried out on a larger spatial (geographical) scale.

Therefore, despite the general similarity of the attributes of the surveyed enterprises in both clusters, these clusters differ. This has an impact on the specifics of implementing innovative processes. It determines:

- the enterprise's ability to enter into lasting and complex relationships with stakeholders (including clients) and the continuity of financing innovative processes;
- the ability of enterprises to identify opportunities in the environment as well as risk factors and transform them into business benefits through innovative processes;
- the ability to maintain the continuity of innovative processes and continuously supply them with the required resources of a certain value, as well as transforming innovation into value for stakeholders (including clients);
- possibilities of increasing the flexibility of innovative processes and increasing the development potential of enterprises and strengthening their market position through the implementation of innovative projects;
- the ability to reach specific classes of clients and adapt to these classes various, appropriate forms of communication and establishing lasting relationships, as well as transforming these relationships into sources of value in innovative processes.

Considering the specificity of innovative processes, it can be seen that establishing relationships between an enterprise and clients nowadays conditions both the enterprise's ability to initiate innovative processes and their planned, purposeful, targeted and effective implementation. Innovations are currently being developed with clients in mind and are intended to "meet the needs of clients" and even create those needs (Guodong, Yang, Qingsong, & Fei, 2014; Sun & Zhang, 2014; Ramírez & García-Peñalvo, 2018). Thus, the client becomes a kind of "center" of innovative processes. Most (if not all) activities of enterprises are oriented around the possibilities, needs, and requirements of clients (Louw, Schutte, Seidel, & Imser, 2018). Thus, it can be assumed that the attributes of modern innovative enterprises and their market activities provide the basis for developing the scale and scope of relationships with clients, and a modern client can

also be treated as a dynamic resource that determines the specificity of innovative processes in an enterprise.

The above situation is reflected in the examined entities, because:

1. In cluster No. 1, enterprises require primarily seeking customers who will provide information on the basic marketing attributes of innovative products and services (according to the 4P or 7P principle);
2. In cluster 2, enterprises should look for such clients (and effectively and effectively involve them in innovation processes) who will be a source of knowledge on developing business models based on internet technologies;
3. In cluster No. 1 there are enterprises for which customers should be the primary source of feedback at the conceptual stage of innovation, which is key in terms of planning activities and resources that can later affect the price and basic functions of innovation, in turn for entities from Cluster No. 2 customers can be a source of information important at the stages of development and implementation of innovation, because their requirements and guidelines can expand the extended functions of innovation (in this cluster price is not so important for customers);
4. Clients (belonging to leading market segments) become in a sense employee of enterprises because they permanently and on a large scale participate in innovative processes—especially when enterprises have limited access to the creativity of their own employees; this necessity is particularly evident in enterprises belonging to cluster No. 1;
5. In cluster No. 2 there are entities that are somewhat "forced" to provide their clients with reliable and up-to-date information about the market offer and changes in this offer—this is particularly important in the context of ensuring and maintaining the trust and commitment of these clients, as well as "retaining" their company (long-term loyalty);
6. Enterprises belonging to cluster 2 should be focused mainly on seeking clients interested in involvement in innovative processes and creating value for the enterprise (and not only for customers); at the same time, enterprises in this cluster should be aware that such clients are very "sensitive" to changes in the behavior of entrepreneurs and market changes and may "leave" in a situation where the value created for the enterprise exceeds the value felt by customers; enterprises—especially in cluster No. 2—should "care" for clients, because they are not able to finance innovative processes on their own, and the continuous fluctuation of "creative clients" participating in innovative processes may generate additional costs and be a source of risk, e.g. market;
7. In enterprises from cluster No. 1 they should be oriented towards "passive" involvement of their clients in innovative processes, i.e. clients mainly receive information and possibly submit their own proposition of value innovation (they should not be "pressed" because it will not bring the expected effect); in turn, in cluster No. 2 enterprises should "actively" engage clients in innovation processes, i.e. not only provide them with the desired information on service/manufacturing activities but also submit inquiries about the proposal of innovation/value.

In summary, it can be assumed that both classes of enterprises should engage clients in innovative processes, but on different principles, tailored to the specifics of their business and the needs, capabilities, and requirements of clients.

Conclusions

Contemporary enterprises (taking into account the complexity of their activities and the dynamics of the broadly understood environment) should include various classes of stakeholders in their activities, especially in innovation processes. Customers deserve special importance here. This is due to the fact that modern enterprises are (in most cases) focused on increasing their value by providing specific values to customers. However, a specific "problem" is that customers are not a homogeneous set of people. They differ in many aspects, especially the behavior towards salespeople. Therefore, enterprises should identify the leading classes of their clients and only then define the principles of their involvement in innovative processes. This is confirmed by the results of the empirical study. Two classes of enterprises distinguished in the study differ not only in the basic attributes of business activity but also in the way clients are involved in innovative processes. It is worth remembering that clients are a kind of reflection of the "specificity" of the company, so their behavior should be consistent with the specificity of innovative processes. It should also be emphasized that in both clusters the customer is an important and dynamic resource in innovative processes, which should be taken care of so that it develops all the time and is a source of useful knowledge and creativity for the company in the long run.

References

- Apte, U., & Davis, M. (2019). Sharing Economy Services: Business Model Generation. *California Management Review*, 61(2), 104-131. doi: 10.1177/0008125619826025.
- Bachmann, A., & Morton Jr., R.A. (2013). Green Light PVP: Customer Driven Innovation and Contemporary Clinical Review. *AUA News*, 2-3.
- Bailey, Ch., Baines, P.R., Wilson, H., & Clark, M. (2009). Segmentation and customer insight in contemporary services marketing practice: why grouping customers is no longer enough. *Journal of Marketing Management*, 25(3-4), 227-252. doi: 10.1362/026725709X429737.
- Bartkowiak, R., & Wachowiak, P. (Eds.) (2016). *New paradigms in economic sciences*. Warsaw, PL: Warsaw School of Economics.
- Bombol, M. (2018). Consumer and innovation-loopback and Synergy. In Pietrewicz, J.W., and Sobiecki, R. (Eds.), *Innovative wave in society and economy* (pp.63-87). Warsaw, PL: Warsaw School of Economics.
- Brodie, R.J., Hollebeek, L.D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252-271.
- Cielemęcki, M., & Wereda, W. (2018). The use of the concept of employer branding as a strategic tool for creating the employer's image. In Brătianu, C., Zbucnea, A., and Vitelar, A. (Eds.), *Strategica. Challenging the Status Quo in Management and Economics* (pp.416-430). Bucharest, RO: Tritonic.
- Freeman, R.W. (2017). Understanding Customer 4.0—the Customer led revolution. Retrieved from www.wcomc.org.
- Frey, A., Trenz, M., & Veit, D. (2019). Three Differentiation Strategies for Competing in the Sharing Economy. *MIS Quarterly Executive*, 18(2), 143-156. doi: 10.17705/2msqe.00013.
- Gołab-Andrzejak, E., & Gębarowski, M. (2018). Creating Hotel Services from a Perspective of Extraordinary Customer Experience. *Handel Wewnętrzny*, 4, 89-100.
- Grewal, D., Ahlbom, C., Beitelspacher, L., Noble, S.M., & Nordfalt, J. (2018). In-Store Mobile Phone Use and Customer Shopping Behavior: Evidence from the Field. *Journal of Marketing*, 82, 102-126.
- Guodong, Y., Yang, Y., Qingsong, X., & Fei, L. (2014). Research on the time optimization model algorithm of Customer Collaborative Product Innovation. *Journal of Industrial Engineering & Management*, 7(1), 137-152. doi: 10.3926/jiem.838.
- Hartigan, J.A., & Wong, M.A. (1979). A K-Means Clustering Algorithm. *Applied Statistics*, 28, 100.
- Hurley, R.F., & Hult, G.T. M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of Marketing*, 62, 42-54.
- Husain, Z., Al-Tameem, A.A., & Gautam, V. (2013). Technology Based Management of Customer Relational Capital: Human-Touch Still a Necessity. *Journal of Services Research*, 13(1), 53-74.
- Kajstura, A. (2019). K-means method. Retrieved from <https://www.statystyka.az.pl/analiza-skupien/metoda-k-srednich.php>.
- Karliński, K., & Rudolf, T. (2009). Customers' knowledge develops the company. *Marketing w Praktyce*, 5, 6-9.
- Kasiewicz, S., & Urban, W. (2009). Building flexibility in manufacturing and service activities. In Kasiewicz, S., Ormińska, J., Rogowski, W., & Urban, W. (Eds.), *Methods for achieving agility of business* (pp.87-116). Warsaw, PL: Warsaw School of Economics.
- Kotler, Ph., Kartajaya, H., & Setiawan, I. (2017). *Marketing 3.0. Moving from traditional to digital*. New Jersey, NJ: John Wiley & Sons.
- Louw, L., Schutte, C.S., Seidel, C., & Imser, C. (2018). Towards a Flexible Innovation Process Model Assuring Quality and Customer Needs. *South African Journal of Industrial Engineering*, 29(1), 155-168. doi: 10.7166/29-1-1911.
- Marston, C. (2005). *Motivating the "What's in it for me?" workforce. Manage across the generational divide and increase profits*. Hoboken, NJ: John Wiley.
- McQueen, J. (1967). Some Methods for Classification and Analysis of Multivariate Observations. *Proceedings of the 5th Berkeley Symposium on Mathematical Statistics and Probability*, 1, 281-297.
- Muñoz, P., & Cohen, B. (2018). A Compass for Navigating Sharing Economy Business Models. *California Management Review*, 61(1), 114-147. doi: 10.1177/0008125618795490.
- Pakulska, T. (2017). Business environment and development sharing economy. In Poniatowska-Jaksch, M., and Sobiecki, R. (Eds.), *Sharing economy* (pp.39-53). Warsaw, PL: Warsaw School of Economics.
- Pakulska, T., & Poniatowska-Jaksch, M. (2009). *Trans-national corporations and global resourcing*. Warsaw, PL: Warsaw School of Economics.

- Pakulska, T., & Poniatowska-Jaksch, M. (2015). Regrouping enterprises in the process of internationalization. In Poniatowska-Jaksch, M. (Ed.), *New thinking in strategic enterprise management* (pp.89-148). Warsaw, PL: Warsaw School of Economics.
- Pietrzykowski, R., & Kobus, P. (2006). Use of k-mean method's modifications in portfolio analysis. *Ekonomika i Organizacja Gospodarki Żywnościowej*, 60, 301-308.
- Ramírez, M.-S., & García-Peñalvo, F.-J. (2018). Co-creation and open innovation: Systematic literature review. *Comunicar*, 26(54), 9-18. doi: 10.3916/C54-2018-01.
- Sawhney, M., Wolcott, R.C., & Arroniz, I. (2006). The 12 different ways for companies to innovate. *MIT Sloan Management Review*, 47(3), 75-82.
- Sebestyen, G.S. (1962). *Decision making process in pattern recognition*. New York, NY: John Wiley and Sons.
- Shamim, A., Ghazali, Z., & Albinsson, P.A. (2016). An integrated model of corporate brand experience and customer value co-creation behaviour. *International Journal of Retail & Distribution Management*, 44(2), 139-158.
- Sofi, M.R., & Hakim, I.A. (2018). Customer Relationship Management as Tool to Enhance Competitive Effectiveness: Model Revisited. *FIIB Business Review*, 7(3), 201-215. doi: 10.1177/2319714518798410.
- StatSoft. (2006). Electronic Statistics Handbook. Retrieved from <http://www.statsoft.pl/textbook/stathome.html>.
- Sun, R., & Zhang, H.-F. (2014). The Influence of Customer Relationship Learning on Product Innovation Performance. *Pakistan Journal of Statistics*, 30(6), 1141-1160.
- Tayur, S. (2013). Planned spontaneity for better product availability. *International Journal of Production Research*, 51(23/24), 6844-6859. doi: 10.1080/00207543.2013.774507.
- Tynan, C., McKechnie, S., & Chhuon, C. (2010). Co-creating value for luxury brands. *Journal of Business Research*, 63(11), 1156-1163.
- Varnali, K. (2019). Understanding customer journey from the lenses of complexity theory. *Service Industries Journal*, 39(11/12), 820-835.
- Vassileva, B. (2017). Marketing 4.0: How Technologies Transform Marketing Organization. *Óbuda University e-Bulletin*, 7(1), 47-56.
- Wereda, W. (2018). Model of Building Stakeholder Engagement in the Functioning of the Organization—Trust and Risk. *Annales Universitatis Mariae Curie-Skłodowska. Sectio H (Oeconomia)*, LIII(6), 111-127.
- Wereda, W., & Woźniak, J. (2019). Building Relationships with Customer 4.0 in the Era of Marketing 4.0: The Case Study of Innovative Enterprises in Poland. *Social Sciences*, 8(177), 1-27.
- Weresa, M.A. (2008). Globalisation of Innovations in the Present-Day World Economy. *Zeszyty Naukowe. Kolegium Gospodarki Światowej SGH*, 23, 9-27.
- Woźniak, J. (2019). *Risk management in creative industries*. Warsaw: CeDeWu.
- Wyrozębski, P. (2016). Risk and uncertainty in the project planning process. In Trocki, M. and Bukłaha, E. (Eds.), *Project Management—Challenges and Research Results* (pp.71-100). Warsaw, PL: Warsaw School of Economics.
- Zalewska-Turzyńska, M. (2017). Gamification—an Invaluable Source for Gaining Information on the Customer in the Contemporary Market. *Handel Wewnętrzny*, 6, 417-423.
- Шерешева, М.Ю., Калмыкова, Н.М., Валитова, Л.А., & Березка, С.М. (2017). Creating Value for Customers 50+ Taking into Account Their Cognitive Age. *Moscow University Economics Bulletin*, 6(1), 147-168.