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## Value Creation by Engaging Customers in the Process of Product and Business Design in a Virtual Environment

### Summary

The article presents the benefits of co-creating value with consumers in a virtual environment based on the research conducted on a group of 134 enterprises. The issue of co-creation of value is now one of the new directions referring to the use of wisdom of "crowds" in building a competitive advantage of the enterprise. The article presents the benefits of using this approach in the organisations discussed in the literature and the opinions of managers about the benefits mentioned in the research.

Key words: co-creation, value, customer behaviour, product design.

JEL codes: M11, M31, O33

### Introduction

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The value proposition for years has been a constant element of discussion and analysis among researchers in marketing and management sciences. The concept of value is multidimensional. In a marketing approach that puts the customer - in the light of contemporary theories - at the center of the enterprise's interest, the value is seen as the ability of products and services to deliver the desired benefits to customers. It plays an essential role in building consumer satisfaction and influencing the market position of the company. In the traditional sense, the value creation process was conducted in the enterprise. Customers were the only recipients of the final value proposition, prepared in the form of products and services offered by the company. The changes that are taking place in technology, unlimited access to the Internet, consumer behavior and consumption patterns are shifting the customer from passive value recipients to active creators and co-creators.

### **Theoretical part**

Value, according to the most general definition on the ground of marketing theory, is ,,the ability of products, services, and activities to meet the needs or deliver the benefit to the buyer" (Haksever, Chaganti 2004, p. 295-307). Contemporary marketing theories place the customer at the center of interest and the client, as the buyer of goods and services, determines the final and subjective value of the exchange transaction. In this perspective, the value can be seen as a bundle of benefits to the consumer resulting from the consumption of

Table 1		
Areas of potential bene with clients	efits for the comp	Areas of potential benefits for the company resulting from co-creating value with clients
Benefits	Author/year	Publications
Increase in customer satisfaction	<ul> <li>B. Dong and others (2008), A.L. Roggeveen and others (2012), S. Nambisan and others (2007)</li> </ul>	<ul> <li>B. Dong, K. R. Evans, S. Zou, <i>The effects of customer participation in co-created service recovery</i>, "Journal of the Academy of Marketing Science", 36(1), 2008, s.123-137; A.L. Roggeveen, M. Tsiros, D. Grewal, <i>Understanding the co-creation effect: when does collaborating with customers provide a lift to service recovery?</i>, "Journal of the Academy of Marketing Science", 40(6), 2012, s.771-790; S. Nambisan, R. A. Baron, <i>Interactions in virtual customer environments: Implications for product support and customer relationship management</i>, "Journal of Interactive Marketing", 21(2), 2007, s.42-62.</li> </ul>
Increased repeatability of purchases	Dong and others (2008), Roggeveen and others (2012)	<ul> <li>B. Dong, K. R. Evans, S. Zou, <i>The effects of customer participation in co-created service recovery</i>, "Journal of the Academy of Marketing Science", 36(1), 2008, s.123-137; A. L. Roggeveen, M. Tsiros, D. Grewal, <i>Understanding the co-creation effect: when does collaborating with customers provide a lift to service recovery</i>?, "Journal of the Academy of Marketing Science", 40(6), 2012, s.771-790.</li> </ul>
Improving the quality of products/services offered by the company.	Füller and others (2012), Van Doorn and others (2010)	<ol> <li>Füller, K. Hutter, R. Faullant, Why co creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions, "R&amp;D Management", 41(3), 2011, s.259-273; J. Van Doorn, K. N. Lemon, V. Mittal, S. Nass, D. Pick, P. Pirner, P. C. Verhoef, Customer engagement behavior: Theoretical foundations and research directions. "Journal of Service Research", 13(3), 2010, s.253–266.</li> </ol>
Lowering costs.	Ramaswamy and others (2010)	V. Ramaswamy, F. Gouillart, The Power of Co-Creation, Build It with Them to Boost Growth, Productivity, and Profits, Free Press, New York, Toronto, Sydney, 2010.
Increased productivity.	Ramaswamy and others (2010)	V. Ramaswamy, F. Gouillart, The Power of Co-Creation, Build It with Them to Boost Growth, Productivity, and Profits, Free Press, New York, Toronto, Sydney, 2010.
The growth of recommendations among consumers.	Van Doorn and others (2010), Piligrimiene and others (2015)	<ol> <li>Van Doorn, K. N. Lemon, V. Mittal, S. Nass, D. Pick, P. Pirner, P. C. Verhoef, Customer engagement behavior: Theoretical foundations and research directions. "Journal of Service Research", 13(3), 2010, s.253–266; Z. Piligrimiene, A. Dovaliene, R. Virvilaite, Consumer Engagement in Value Co-Creation: what Kind of Value it Creates for Company?, "Inzinerine Ekonomika-Engineering Economics", 26(4), 2015, s. 452–460.</li> </ol>

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ANNA ŁASZKIEWICZ 161

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Benefits	Author/year	Publications
Reduce market risk.	Maklan and others (2008), Ramaswamy and others (2010), Piligrimiene and others (2015)	S. Maklan, S. Knox, L. Ryals, New trends in innovation and customer relationship management: a challenge for market researchers. "International Journal of Market Research", 50(2), 2008, s. 221-240; V. Ramaswamy, F. Gouillart, The Power of Co-Creation, Build It with Them to Boost Growth, Productivity, and Profits, Free Press, New York, Toronto, Sydney, 2010; Z. Piligrimiene, A. Dovaliene, R. Virvilaite, Consumer Engagement in Value Co-Creation: what Kind of Value it Creates for Company?, "Inzinerine Ekonomika-Engineering Economics", 26(4), 2015, s. 452–460.
Expanding market opportunities. Increase in sales.	Ramaswamy and others (2010) Piligrimiene and others (2015)	<ul> <li>V. Ramaswamy, F. Gouillart, The Power of Co-Creation, Build It with Them to Boost Growth, Productivity, and Profits, Free Press, New York, Toronto, Sydney, 2010.</li> <li>Z. Piligrimiene, A. Dovaliene, R. Virvilaite, Consumer Engagement in Value Co-Creation: what Kind of Value it Creates for Company?, "Inzinerine Ekonomika-Engineering Economics", 26(4), 2015, s. 452–460.</li> </ul>
Improvement of the company's innovativeness in the scope of development of products/ services or processes.	Van Doorn and others (2010), Piligrimiene and others (2015)	<ol> <li>Van Doorn, K. N. Lemon, V. Mittal, S. Nass, D. Pick, P. Pirner, P. C. Verhoef, Customer engagement behavior: Theoretical foundations and research directions. "Journal of Service Research", 13(3), 2010, s.253–266; Z. Piligrimiene, A. Dovaliene, R. Virvilaite, Consumer Engagement in Value Co-Creation: what Kind of Value it Creates for Company?, "Inzinerine Ekonomika-Engineering Economics", 26(4), 2015, s. 452–460.</li> </ol>
Access to the current market information.	Van Doorn and others (2010), Piligrimiene and others (2015)	J. Van Doorn, K. N. Lemon, V. Mittal, S. Nass, D. Pick, P. Pirner, P. C. Verhoef, Customer engagement behavior: Theoretical foundations and research directions. "Journal of Service Research", 13(3), 2010, s.253–266; Z. Piligrimiene, A. Dovaliene, R. Virvilaite, Consumer Engagement in Value Co-Creation: what Kind of Value it Creates for Company?, "Inzinerine Ekonomika-Engineering Economics", 26(4), 2015, s. 452–460.
Source: Łaszkiewicz (2018 in print).	t print).	

goods or services both in current mode directly linked to use and deferred (Iwińska-Knop, Szymańska 2016, p.83). So far, companies have been involved in the process of value creation, and then the effects of this process were passed on to consumers. As a result of changes in the market, especially in the area of the strategic position of the consumer as well as technological possibilities, we increasingly observe that customers participate in the value creation process. At the same time, the value and act of its creation begin to go beyond the walls of the company. The current concept of marketing related to value should take into account the shift from the production of value to customers to the creation of value with clients. The idea of co-creation was first introduced in 1996 and was proposed by Kambil, Ginsberg and Bloch (1996) and later popularized by Prahalad and Ramaswamy (2000; 2004; 2004a; 2004b). They define co-creation as a process of creating value by companies and clients based on mutual interactions (Gallvagn, Dalli 2014, p. 643-683) with the use of information and communication technologies (Piligrimiene, Dovaliene, Virvilaite 2015).

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Kotler (https://siliconrepublic.com) points out that the benefits of collaboration between the company and its shareholders and customers will enable enterprises to gain insight into the needs of the marketplace, strengthening the company's competitive position and becoming a source of unique benefits. Organizations, as never before, have the opportunity to quickly access experts, knowledge and intellectual resources without any limitations of time and space. Plata-Alf (2014, p. 1211) notes that the voice of the community, which is called the voice of the crowd, becomes "a decision-making tool". Contemporary consumers take part in the creation of products and services, engage in the improvement of the company's existing offer and processes, express opinions, share information and recommendations on brands, purchase and postpurchase experiences. They therefore participate in jointly generating value with the company. To a large extent, the participation of clients in such undertakings takes place on the basis of volunteering (Łaszkiewicz 2014, p. 1123-1128). Many researchers, however, agree that customer engagement is crucial in the process of co-creation. The benefits of consumer involvement in value creation with the company appeared in the previous studies, are presented in Table 1.

### **Presentation of the research methodology**

The research was supposed to help identify the potential of co-creating value with clients in a virtual environment in the area of building a market advantage of the company in the opinion of managers representing the surveyed companies.<sup>1</sup>

The study covered enterprises that conduct business in a virtual environment and are open to new solutions in the area of management and marketing innovations. Due to the lack of a complete list of elements of the population, it was decided to select the purposive sample. The survey was conducted from 26 August to 18 October 2016. Managers gathered

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<sup>&</sup>lt;sup>1</sup> This study is the part of the larger research project presented in: Łaszkiewicz (2018 in print).

### 164 VALUE CREATION BY ENGAGING CUSTOMERS IN THE PROCESS OF PRODUCT...

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in the professional LinkedIn group were invited to participate in the study. The invitations included links to the online questionnaire. Because it is an international group, the survey was prepared in two language versions: Polish and English. Its design and readability have been verified in a pilot study by ten selected managers representing companies with a different business profile and size. Subsequent corrections were made to this observation. The questionnaire in the Polish version was completed by 157 participants, while the questionnaire in the English version was completed by 42 subjects. In total, 199 questionnaires were registered, including 134 with complete answers, which were subjected to further statistical analysis. The study involved large enterprises employing over 250 employees (52.2%) and enterprises in which the service activity is dominant accounted for 65% of respondents. The remaining respondents represented companies with a production (19.4%) and commercial (14.9%) profile.

### Analysis of findings

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Of all respondents who participated in the study, only 11.2% declared lack of knowledge of the issue of co-creating value with clients in a virtual environment. 49.3% of the respondents were familiar with this idea, but they did not deal with it in business practice. Respondents who declared co-creation of value activities with customers accounted for 39.6%, of which less than 13% (12.7%) declared that their business systematically uses the idea of co-creating value with customers and that this approach is part of the business model of the company.

Respondents were asked the question, consisting of twelve statements regarding the impact of co-creation of value on particular areas of the enterprise. Issues related to areas such as customer behavior (satisfaction, repeatability, recommendations) and business functioning (quality of the offer, cost, performance, market risk, market opportunities, sales, development and innovation, and competitive advantage). The basis for identifying the potential benefits included in the question was a literature review of the subject (see Table 1).

Of the twelve benefits of co-creating value with consumers in a virtual environment presented to managers, the majority of benefits (10 of them) have received a positive response from respondents (over 50% positive). Negative responses dominated only in two areas, or respondents had an ambivalent attitude or no opinion. The first one concerns the impact of co-creating value with consumers on reducing costs, which is not the case for the 21.8% of respondents and 3.4% of managers definitely disagree. The second area, which the respondents disagree with, is related to the increase in productivity - 16% of respondents do not agree with this statement.

Co-creation of values with clients influences the increase of customer satisfaction - 95.8% of respondents believe so. Highly ranked were also: the improvement of the quality of the products/services offered by the company (89.9%); the influence of co-creation with customers on obtaining market information (87.39%); perceived influence of co-creation

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of value with consumers on the innovativeness of the company in terms of product or process development (84.87%) and influence on the increase of market opportunities (84.03%). Interestingly, co-creating values with clients to a lesser extent in the opinion of respondents translates into an increase in sales, only 71.43% agree with this statement, while areas directly related to the potential of generating sales increases, such as product quality, innovation or customer recommendations. They were significantly higher rated by respondents (see Table 2).

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### Table 2

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# Opinions of managers regarding the impact of co-creation of value with consumers on particular areas related to the position of the company on the market (%)

Specification	I definitely disagree	I do not agree	I do not agree or disagree	I agree	I definitely agree	I do not know / it's hard to say
Co-creating value with clients influences the increase in customer satisfaction.	1,7	0,0	2,5	46,2	49,6	0,0
Co-creating value with clients increases repeatability of purchases.	0,8	1,7	18,5	37,8	32,8	8,4
Co-creating value with clients contributes to the improvement of the quality of products/services offered by the company.	0,8	1,7	6,7	39,5	50,4	0,8
Co-creating value with clients contributes to lowering costs.	3,4	21,8	28,6	23,5	10,9	11,8
Co-creating value with customers contributes to productivity growth.	0,8	16,8	32,8	29,4	11,8	8,4
Co-creating value with clients translates into an increase in recommendations among consumers.	0,8	0,8	10,1	39,5	47,1	1,7
Co-creating value with customers leads to a reduction of market risk.	0,8	7,6	23,5	45,4	16,0	6,7
Co-creating value with clients contributes to expanding market opportunities.	0,8	4,2	10,1	54,6	29,4	0,8
Co-creating value with customers leads to increased sales.	0,0	3,4	21,0	47,1	24,4	4,2
Co-creating value with clients influences the company's innovation in the area of product/service development or	0.0	4.2	10.1	42.0	42.0	0.8
processes.	0,0	4,2	10,1	42,9	42,0	0,8
Co-creating value with customers allows companies to obtain up-to-date information about the market.	0,0	3,4	7,6	46,2	41,2	1,7
Co-creating value with clients can become a crucial source of competitive advantage for the company.	1,7	1,7	8,4	40,3	46,2	1,7

Source: as in Table 1.

Comparing the opinions of managers who use the idea of co-creating in practice with the answers of managers who know the issue only from theory, one can notice interesting differences. The second group rated the highest: the impact of co-creation on the increase ( )

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in customer satisfaction (94% of positive responses - 98.1% in the group applying in practice); the increase in recommendation among consumers (87.9% positive responses, 84.9% in practice) and the quality of products/services (83.4% vs. 98.1% in the group of practitioners). Practitioners rated higher the possibility of using co-creation of value with clients as a source of competitive advantage for the company than people not dealing with the problem in practice (92.5% and 81.8% respectively).

### Conclusions

Researched enterprises are familiar with the issue of co-creating value with consumers in a virtual environment, but they rarely use this solution. Only 13% of them use co-creation of values with consumers as an element of the business model. Undoubtedly, enterprises recognise the business potential in cooperating with clients in a virtual environment. The overwhelming majority of surveyed companies (over 86%) believe that co-creating value with clients can become an important source of competitive advantage on the market.

Consumers started to create ecosystems and virtual communities whose significance and impact on modern enterprises is gradually growing. They are no longer the recipients of the offer available on the market, but they are conducting a dialogue with the market and are also willing to engage in creating goods and services, modifying them or preparing from scratch. It can be a source of benefits for enterprises. Their range and durability, as well as the value compared to the activities of professional designers and experts, is an interesting field for further research.

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### Współtworzenie wartości poprzez angażowanie konsumentów w projektowanie produktów i procesów przedsiębiorstwa w środowisku wirtualnym

### Streszczenie

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W artykule zaprezentowano korzyści płynące ze współtworzenia wartości z konsumentami w środowisku wirtualnym na podstawie badania przeprowadzonego na grupie 134 przedsiębiorstw. Zagadnienie współtworzenia wartości jest obecnie jednym z nowych kierunków odnoszących się do wykorzystania mądrość "tłumów" w budowaniu przewagi przedsiębiorstwa. W artykule przytoczono zestawienie korzyści wynikających z zastosowania tego podejścia w organizacjach zaprezentowanych w literaturze oraz opinie menadżerów w odniesieniu do wymienionych korzyści, pozyskane w ramach prowadzonych badań.

Słowa kluczowe: współtworzenie, wartość, zachowanie konsumenta, projektowanie produktu.

Kody JEL: M11, M31, O33

# Совместное формирование ценности путем вовлечения потребителей в проектирование продуктов и процессов предприятия в виртуальной среде

### Резюме

Статья представляет выгоды, вытекающие из совместного с потребителями формирования ценности в виртуальной среде на основе обследований, проведенных в группе 134 предприятий. Вопрос совместного формирования ценности – в настоящее время одно из новых направлений, касающихся использования мудрости «толпы» в формировании преимущества предприятия. ( )

### 168 VALUE CREATION BY ENGAGING CUSTOMERS IN THE PROCESS OF PRODUCT...

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В статье привели сводку выгод, вытекающих из применения этого подхода в организациях, представленных в литературе, а также мнения менеджеров насчет указанных выгод, полученные в рамках проводимых обследований.

Ключевые слова: совместное созидание, ценность, поведение потребителя, проектирование продукта.

**Коды JEL:** М11, М31, О33

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