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Marketing i Zarządzanie (d. Problemy Zarządzania, Finansów i Marketingu) nr  
5 (46), 87-94

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2016

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# Customer knowledge valuation model based on customer lifecycle

**JEL code:** M31

**Keywords:** customer knowledge, customer knowledge management, customer knowledge valuation, customer knowledge valuation model, customer lifecycle

**Abstract.** Customers can create value for firms in a variety of ways. Four of them are parts of customer relationship management (CRM), and mentioned as customer engagement value (CEV) components. The first component is customer lifetime value (CLV); the second is customer referral value (CRV); the third component is customer influencer value (CIV); the fourth component is customer knowledge value (CKV). There are a lot of works concerning the particular CEV element estimates, such as CLV, and recently also CIV or CRV. However, it is important to notice that there is no work on how to estimate CKV. Based on the observations above, finding a model to estimate CKV would be relevant and interesting.

## Introduction

Assessing the value of customers based solely upon their transactions with a firm may not be sufficient, and valuing this engagement correctly is crucial in order to avoid undervaluing and overvaluing customers. Customer knowledge value is beyond direct transactions value (Kumar et al., 2010, pp. 297–310). The aim of this study is to present the theoretical background of the concept of customer knowledge

and customer knowledge management approaches, and customer knowledge valuation model proposition based on a customer lifecycle theory. To obtain our results, we reviewed the literature, and the character of this paper is conceptual. The proposed model consists of two dimensions – the type of value created and customer lifecycle phase allowing for the assessment of the stream of customer knowledge value in every phase.

### Customer knowledge concept

In this paper, we define knowledge as a “fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluation and incorporating new experiences and information” (Davenport, Prusak, 1997). Customer knowledge is understood as the knowledge *from* customers in opposite to the knowledge *about* customers (Gebert, Geib, Kolbe, Brenner, 2003, pp. 107–123; Lee, Cheung, Lim, Sia, 2006, pp. 289–303) and the knowledge *for* customers (Zanjani, Rouzbehani, Dabbagh, 2008, pp. 277–281), and it differs in terms of its character. The difference between these types of knowledge is that the knowledge *from* customers is about the issues that are related to a product or services, in opposite to the knowledge *about* or *for* customers that can be used to assist the customer in making a purchase decision (García-Murillo, Annabi, 2002, pp. 875–884). In this paper, we are concerned with knowledge *from* customers.

In the CLV literature, customer knowledge dominates as a stream of value that customers provide to a firm, and is a component of customer lifetime value. It manifests in indirect-monetary contributions such as information, cooperation, and innovation value. Information value consists of monetary information benefits subtractive of information costs, and is referred to as ‘net basis’. The effects of innovation and cooperation value arise from know-how transfer or product, and process innovations stimulated by lead users, for example in the context of customer integration programs (Bauer, Hammerschmidt, 2003, pp. 47–67; Bauer, Hammerschmidt, 2005, pp. 331–348).

Knowledge resides in customers like experience and insights about the products or services (Lee et al., 2006, pp. 289–303). Customers possess knowledge about product ranges, such as compatibility between computer hardware components or the efficacy of specific drugs in treating complaints, and about the wider context and marketplace into which products and services are delivered (Rowley, 2002, pp. 500–511). Customer knowledge data is based upon “Feedback”, “Discussion Board”, and “Member Data” (Zanjani, Rouzbehani, Dabbagh, 2008, pp. 227–281). Knowledge from a customer is the kind of knowledge (also data or information which can be analyzed, interpreted, and eventually converted into knowledge) that

the company attains in order to enhance its products and services (Zanjani et al., 2008, pp. 227–281). Customer knowledge is an expression of customer experience and creativity, and it is about gaining, sharing, and expanding the knowledge of (inside) the customer – individual or group experiences in applications, competitor behavior, possible future solutions, etc. (Gibbert, Leibold, Probst, 2002, pp. 1–16). Knowledge from customers is a customer’s knowledge of products, suppliers, and markets.

The diversity of understanding the customer knowledge concept leads to the conclusion, that customer knowledge can be viewed as an entity with distinctive attributes that can be deconstructed and analyzed in detail or viewed as an integrated whole. The former perspective is epistemological, and the latter one – ontological. Epistemological knowledge management models, therefore, view knowledge as an entity that can be deconstructed into discrete, relevant attributes, based on the epistemological foundation held by the modeler. Ontological knowledge management defines knowledge solely through its relationships with a constructed universe of discourse, encompassing all the dimensions that are relevant to the modeler. Ontological knowledge managers view knowledge as a “black box: with undefined inherent characteristics. Ontological knowledge management frequently uses modelling dimensions which include a process dimension, an agent dimension (individual vs. group) and a financial dimension. (Gebert et al., 2003, pp. 107–123).

Based on the above considerations, we can say that customer knowledge is a fluid mix of framed experience, values, contextual information, and an expert insight that provides a framework for evaluation and incorporating new value for a firm. The firm uses this value to enhance the value for different stakeholders, especially customers.

### **Customer knowledge management**

In this paper, customer knowledge management (CKM) means managing knowledge *from* customers. CKM is the strategic process by which cutting-edge companies emancipate their customers from passive recipients of products and services to empowerment as knowledge partners (Gibbert et al., 2002, pp. 1–16). Using customer experience and creativity in the areas of gaining, sharing, and expanding knowledge leads to indicating five styles of CKM – prosumerism, team-based co-learning, mutual innovation, communities of creation, and joint intellectual property (Gibbert et al., 2002, pp. 1–16). Their common characteristic is understanding the customer as an active knowledge partner, but in each of these areas customer knowledge value is not explicitly explained.

Fang (2008, pp. 90–104) notes that customer knowledge management can occur through the customer participation process. Customer participation can be defined as the extent to which a customer is involved in the manufacturer's new product development (NPD) process, and it delineates customer participation along two specific dimensions: customer participation as an information resource (CPI) and customer participation as a codeveloper (CPC). CPI involves activities such as sharing information with the manufacturer during the NPD process. In contrast, CPC refers to the extent to which firm customer task involvement constitutes a significant portion of the development tasks (Fang, 2008, pp. 90–104).

CKM also occurs as customer knowledge development, which is the development of customer preference understanding, and has been identified as a key prerequisite for a new product success (Kumar et al., 2010, pp. 297–310). Customer knowledge development is a process of developing and understanding a customer's new product preferences that unfolds through the iteration of probing and learning activities across stages of the prelaunch phase of new product development (Lynn, Morone, Paulson, 1996, pp. 8–37 as cited in: Joshi, Sharma, 2004, pp. 47–59). Probing activities include the deployment of new product ideas, concepts, and prototypes among target customers, and learning activities entail the analysis of a customer feedback and the development of subsequent probes based on the analysis (Hargadon, Sutton, 1999, pp. 157–166; Leonard, Sensiper, 1998, pp. 112–132 as cited in: Joshi, Sharma, 2004, pp. 47–59).

### **The conceptual model for customer knowledge valuation**

The above mentioned customer knowledge concepts and customer knowledge management patterns provide for a wide variety of CK interpretations, but they seem to be hard to implement in a context of valuation. Since CKM is a part of CRM, we implement a customer lifecycle theory to identify CKV fields. Customer lifecycle is the primary construct in CRM. It determines and organizes the logical flow of thinking about customer value understood as value *from* customers (CLV). Dividing customer relationships with a firm into phases, allows for identification of value streams in each phase (Kumar, 2008; Blattberg, Getz, Thomas, 2001). The assumption that customers share their money and knowledge with a firm, leads to the conclusion that the customer lifecycle theory may be useful in the area of knowledge *from* customers valuating.

According to the customer lifecycle theory, we can identify three types of customers as knowledge providers. These are: prospects, regular, and past customers. An additional category is 'users,' who are not going to be customers, but they know the product/service and they have a sharing potential as knowledge distributors.

A variety of customer knowledge usability types allows for the indication of a variety of CK domains in two dimensions. The first refers to its value to a firm or a customer, and the second refers to the customer lifecycle phase. Table 1 presents a conceptual model of customer knowledge valuation.

Table 1

A conceptual model of customer knowledge valuation

Customer Field	Prospect	Regular	Past	Users (non-customers)
Firm				
Product/service				
information	opinions, suggestions as a tester	opinions, suggestions as a customer	opinions, suggestions as a former user	opinions, suggestions
co-creation	product/service developing process direct participant	product/service developing process direct participant	<i>potentially negligible</i>	<i>potentially negligible</i>
Process				
information	opinions, suggestions as a tester	opinions, suggestions as a user	opinions, suggestions as a former user	opinions, suggestions
co-creation	product/service developing process direct participant	process developing direct participant	<i>potentially negligible</i>	<i>potentially negligible</i>
Customer				
prospect	co-involvement	co-involvement		education
regular	co-involvement	co-involvement		education
past	<i>potentially negligible</i>	re-purchase motivating	<i>potentially negligible</i>	<i>potentially negligible</i>
value for users (non-customers)	potentially negligible	potentially negligible	potentially negligible	education

Source: own elaboration

In terms of value to a firm, prospects give opinions and suggestions as testers. They are not regular customers yet so their opinions may be limited because of their knowledge and experience. They may be involved in the product development process as direct participants, especially in the field of Internet products or services. In terms of value for customers, co-involvement is possible, especially for prospects.

For regular customers, their opinions are not so valuable because of knowledge and experience. There is probably no value that they may deliver to past customers, as well as their opinions probably have no value for users who are not customers yet.

The potential of regular customer knowledge value is higher than prospect's because of their experience. Their opinions and suggestions are probably more valuable than prospects, and their willingness to be a co-creator may be stronger and explicit. In terms of value for customers, their co-involvement may be strong if their experiences are positive. However, their knowledge and experience are rich, and with a proper dose of motivation, would be more frequent. Moreover, regular customers may play a role as re-purchase motivators for former customers.

Past customer knowledge has limited utility because the level of involvement in relationships with a firm rapidly decreases. Customers terminate their relationship with a firm because they are unsatisfied, or their needs have ended. In both situations, positive involvement is unlikely. The most likely scenario is benevolent indifference. Singular opinions and suggestions are possible, but with the risk of being value destructors.

Users (non-customers) are people who use a product/service, but they do not need or want to be customers, i.e. specialized software users. In fact, they may be active as information providers via blogs or forums, especially creating value of education. Their goals may be different than a firm's – they may want to build their position in a particular society as specialists in a particular area (e.g. statisticians using specified statistical software).

## **Summary**

The aim of the study was to present a theoretical background about the concept of customer knowledge and customer knowledge management approaches, and customer knowledge valuation model proposition, based on a customer lifecycle theory. Customer knowledge, as a value generator, needs its measuring system. This system may consist of two dimensions – the type of value beneficiary and their activities, and a customer lifecycle phase. Such an approach captures every knowledge-based value stream from every type of customers. Each of the elements characteristic for a specific type of a customer has particular metrics. They have their financial and nonfinancial dimensions. The first possible research purpose is to identify the character of a stream – a value creator or destructor. The second one is to identify the financial valuation of particular value streams. Joining marketing and intellectual capital theory with financial measuring tools may be interesting and lead to interesting and relevant results.

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### **Koncepcyjny model wyceny wiedzy klienta oparty na cyklu życia klienta**

**Słowa kluczowe:** wiedza klienta, zarządzanie wiedzą klienta, wycena wiedzy klienta, model wyceny wiedzy klienta, cykl życia klienta

**Streszczenie.** Klienci tworzą wartość dla przedsiębiorstwa w różny sposób. W ramach zarządzania relacjami z klientem (CRM) występują cztery sposoby tworzenia wartości, które składają się na wartość zaangażowania klienta (*Customer Engagement Value – CEV*). Pierwszym z nich jest wartość życiowa klienta (*Customer Lifetime Value – CLV*); drugim jest wartość rekomendacji generowanych przez klienta (*Customer Refferal Value – CRV*); trzecim – wartość wpływu społecznego klientów (*Customer Influencer Value – CIV*); czwartym zaś wartość wiedzy klienta (*Customer Knowledge Value – CKV*). Istnieje wiele prac dotyczących CLV i CRV a także, ostatnio, CIV, lecz nie ma prac dotyczących CKV. Stworzenie modelu umożliwiającego pomiar wiedzy klienta w przedsiębiorstwie może stanowić istotny wkład do nauki.

### **Cytowanie**

Tomczyk, P. (2016). Customer knowledge valuation model based on customer lifecycle. *Marketing i Zarządzanie*, 5 (46), 87–94.