Knowledge from Customers:

A Systematic Literature Review

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Customer Knowledge is a term which, in the marketing literature, is usually assumed to consist of three elements (Gebert, Geib, Kolbe, & Brenner, 2003): Knowledge about customers, Knowledge for customers and Knowledge from customers.

Knowledge *about* customers is knowledge held by the firm that can be used for marketing purposes (e.g., knowledge about customer characteristics and preferences). Knowledge *for* customers is knowledge held by the firm that it can transfer to its customers as an additional value component (e.g., in the context of customer education). Knowledge *from* customers is knowledge residing in customers which can be valuable for marketing purposes but is not easily accessible for the firm (e.g., knowledge on how to use a given product or service or on how to modify it).

Knowledge from customers or CK(f) represents a stream of potential value for the firm that can be considered as a part of Customer Engagement Value (CEV). Other elements of CEV include customer lifetime value, customer referral value and customer influence value, the latter two are usually combined into the concept of customer social value. While these three components have been analyzed extensively in research in recent years, Customer Knowledge Value (CKV) has interestingly received no such attention.

In order to explore this gap we start by conducting an in-depth study of the CK(f) concept based on a systematic literature review in which we analyze publication trends over the past 40 years. Through this systematic review we propose a definition of Knowledge from customers and identify ways in which such knowledge can be classified. We equally identify directions of future research in the domain of customer knowledge valuation.

There are variety of concepts which have been discussed in literature to describe different aspects of knowledge from customers from different theoretical angles, but the differences among those perspectives are not always clear cut. Examples include

- prosumerism (Toffler, 1980)
- team-based co-learning (Gibbert, Leibold, & Probst, 2002)
- mutual innovation (E. A. Von Hippel, 1978)
- communities of creation and joint IP/ownership (Gibbert et al., 2002)
- communities of creation (Sawhney, Prandelli, 2000)
- innovative users and users entrepreneurship (Abrell, Pihlajamaa, Kanto, vom Brocke, & Uebernickel, 2016)
- value co-creation (Vargo, Maglio, & Akaka, 2008)
- lead user innovation (E. von Hippel, 1986)
- co-production (Etgar, 2008)
- new product development (Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010)
- crowdsourcing (Whitla, 2009)
- open innovation (Enkel, Gassmann, & Chesbrough, 2009)
- collaborative product development (Eslami & Lakemond, 2016) and
- customer competence (Prahalad & Ramaswamy, 2000).

Given this plethora of concepts providing a clear definition and classification of CK(f) seems essential.

Research Methodology

Systematic Literature Reviews (SLR) can be helpful in this context since they allow to provide a reliable and comprehensive evidence base on the topic (Tranfield, Denyer, & Smart, 2003). In the SLR process we concentrate on CK(f) aspects independently from the theoretical concept which is behind the particular paper analyzed in order to avoid the problem of conceptual ambiguity described above. Specifically, we apply the SLR Model proposed by Tranfield et al which is based on a three-stage procedure: planning, execution, and reporting (Tranfield et al., 2003).

Planning Stage: The goal of the planning stage is to define the objectives of the research and the source of the data. In our analysis we focus on publications included in the EBSCO, ProQuest, Emerald, Science Direct and JSTOR databases. We collected data in March 2017 and included all a articles published prior to this date.

Execution Stage: We start by identifying the literature base. We collected data using peer-reviewed academic journal full papers that include the words *customer knowledge*, *customer knowledge management* and *customer knowledge value* in the title, abstract or keywords[1]. Through this process we identified 199 papers which fall into the following categories: 71 articles on Knowledge about customers, 51 articles on general customer knowledge management (CKM), 41 articles on Knowledge from customers and 36 other articles. We focused our analysis on the 41 articles exclusively devoted to knowledge from customers as a main customer knowledge type and conducted a snowball analysis to supplement the set and identified an additional 143 articles to arrive at a final set of 184 articles which concentrate on CK(f). Based on this set of 184 articles we conducted a bibliometric analysis to identify literature trends, their significance and future prognosis.

Results

Our bibliometric analysis shows that the CK(f) literature starts with three conceptual articles in late 70's by von Hippel (V. Hippel & Eric, 1978; E. von Hippel, 1978; E. Von Hippel, 1977), which could be called classic in the field of customer product idea involvement. The first empirical articles start to appear in mid-80's which marks the time where the customer knowledge research field became explicit and clearly extracted from the general knowledge management field. The majority of research starts in middle 90's, likely

[1] Except JSTORE, where we use the option *title, abstract and caption* and ProQuest, where the option *keywords* was disabled.

due to the Internet revolution. A significant part of the articles published in that period are devoted to e-commerce or industries which use the Internet as a platform to build customer relationships or as a distribution channel. Empirical and methodological papers dominate. The period between 2000 and 2005 can be called the second youth of the concept. Researchers return to conceptual papers as well as empirical ones. This results in increased interest in qualitative research which shows that the area is not well identified and needs to be deeply explored. This leads to increase interest in quantitative research between 2009-2015.

To illustrate the diffusion of articles over time we used the cumulative number of articles since 1976 to 2016 to estimate a Bass Diffusion Model (Bass 1969) – see Figure 1. The predicted number of articles based on this model indicates that research in the field is in its maturity stage and that a substantial increase in the number of articles dealing with knowledge from customer can be expected for next 8 or 10 years. Entering the maturity phase also means that the CK(f) research area can be perceived as stabilized. Adding a new element which is to valuate CK(f) can move the research forward.

Insert Figure 1 approximately here

Knowledge from Customers: Definition

We end the execution stage with a content analysis to propose a definition and classification for CK(f). The analysis shows that only 18 out of 184 CK(f) and 51 CKM articles contain a definition for Knowledge from customers. A detailed content analysis shows that 13 of these 18 papers refer the Knowledge from customers term to a general knowledge term with limitation to marketing elements like products, services, competitors, suppliers and markets.

To understand these definitions we need to refer to the definition of knowledge itself. Based on Davenport and Prusak (Davenport & Prusak, 1998), "*knowledge is a fluid mix of*

framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information". Knowledge exists within people and it is a mixture of various elements. Since Knowledge from customers exist within customers, we can argue that *Knowledge from customers is a fluid mix of framed experience, values, contextual information, and expert insight.* The second part of this definition refers to the contribution of that knowledge. The definition of Desouza and Awazu (Desouza & Awazu, 2005) states that CK(f) "(…) *helps the firm to improve its products/services or design new products/services to better address customers"*. It is easy to imagine, that CK(f) contributes to improve processes or to improve products/services to increase value for a firm. We therefore argue that CK(f) contributes to value for a firm, leading to the following definition:

Knowledge from customers is a fluid mix of framed experiences, values, contextual information, and expert insight, that provides a framework for evaluating and incorporating value for a firm.

Knowledge from Customers: Classification

To conduct a classification of different types of CK(f), we extracted the 136 empirical papers out of 184 and analyzed them for potential classification opportunities. This reveals that 24 out of 136 are difficult to classify since their CK(f) description is unclear or ambiguous. For the remaining 112 articles we employ a 2-dimension analysis. The first dimension is the most commonly used classification of CK(f), namely knowledge related to a *product* or *service*. The second dimension reflects the way in which CK(f) can be manifested, i.e., as an ability *to know, to use or to create* the product or services. Using a two-step cluster analysis with silhouette measure of cohesion and separation > 0.5, we identified three clusters of articles which reflect the most exploited research fields in CK(f) domain. The largest

cluster (47.3%) explores the product-creation field, where CK(f) supports the product-creation process. The second cluster (26.8%) includes articles where CK(f) concerns the use services. The final cluster (25.9%) explores the service-creation field, where CK(f) supports service-creation process.

FIGURE 1: BASS DISTRIBUTION MODEL FOR CK(F) PUBLICATIONS

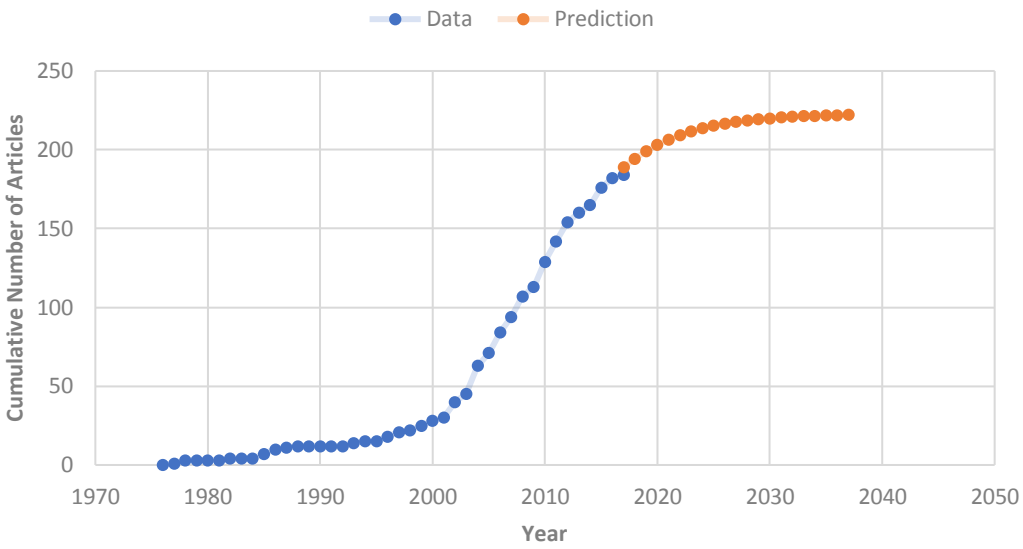
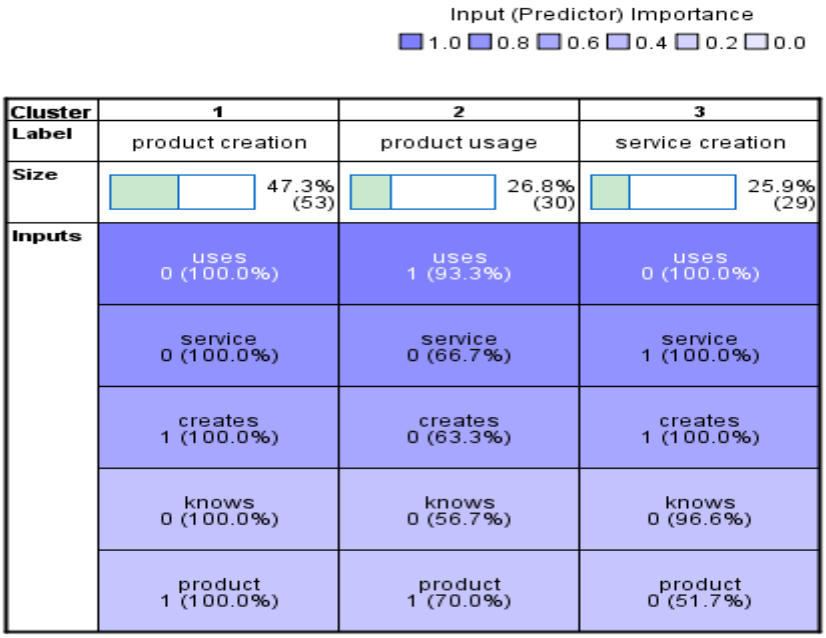


FIGURE 2: CK(F) CLUSTERS CHARACTERISTICS



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