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# Bibliometric Analysis of Scientific Research on Customer Loyalty in the Business-to-Business Context

## Summary

The phenomenon of customer loyalty has long been researched in the marketing literature. Business-to-business marketing literature recognised the customer loyalty issue as an important notion determining business success. The goal of the paper is to identify the area of research that focuses on the topic customer loyalty in the context of business-to-business based on an analysis of bibliometric data of scientific publications indexed in the Scopus database in the period from 2003 till 2017. In particular, the study was focused on the field of customer loyalty in the area of business-to-business, and the authors of that works carried out their research within the discipline of 'Business, Management and Accounting', which was distinguished by Scopus.

**Key words**: customer loyalty, business-to-business, bibliometric analysis, Scopus, VOSviewer.

**JEL codes:** L14, M31

## Introduction

Loyalty has long been researched in the marketing literature and its popularity has yet to wane (Davis-Sramek et al. 2009). A key reason for the sustained interest in loyalty arises from its proven positive effects on a company's success (Dowling and Uncles 1997). As such, loyal customers are considered a company asset (Shugan 2005).

The aim of this paper is identification the most popular areas of scientific research in the domain of customer loyalty in business-to-business context on the basis of bibliometric data of scientific works published in Scopus database between 2003 and 2017. The analysis of the publications will be concentrated on the area of 'Business, Management and Accounting' distinguished by Scopus database. The Scopus database qualifies the publications to different areas based on keywords which were used. In the study author used different techniques of the bibliometric analysis with the support of the VOSviewer software.

## Literature review on customer loyalty

Myriad studies have sought to define and distinguish different dimensions of loyalty and loyalty antecedents (Dick and Basu 1994; Oliver 1999). Some researchers approach loyalty using a behavioral perspective (e.g. Hoyer 1984) while others approach loyalty using an

attitudinal perspective (e.g. Jacoby and Chestnut 1978) or have combined both approaches (Day 1969), with the latter being termed the composite approach.

The concept of behavioral loyalty was first defined in the 1950s and was measured using the proportion of total purchases for one or two brands (Cunningham 1956). The most cited definition of attitudinal loyalty is Jacoby and Chestnut's (1978) one, which defines loyalty as a customer's predisposition towards a brand, which is a function of psychological processes. Perhaps the most commonly used definition in the literature is the composite definition comprising both cognitive and behavioral elements measured by favorable attitudes and intentions and repeat-purchase (see Jacoby and Chestnut 1978).

Loyalty has been researched in a wide array of contexts, including different customer types, namely B2B (e.g. Davis-Sramek et al. 2009) and B2C (e.g. Patterson 2007; Fournier and Yao 1997; Siemieniako and Urban 2006) and different market types including professional services (e.g. Martenson 2008; Mitręga 2006), personal services (e.g. Patterson 2007), fast moving consumer goods (e.g. Day 1969; Merisavo and Raulas 2004), consumer durables (e.g. Peter and Ryan 1976), involving (e.g. Patterson 2007) and non-involving (e.g. Hoyer 1984) products and services. Studies on loyalty have been directed towards different foci including brands (e.g. Merisavo and Raulas 2004), company personnel (e.g. Martenson 2008) and products (e.g. Johnson 1984).

Loyalty has been considered using both a static (e.g. Dick and Basu 1994; Jacoby and Chestnut 1978) or relational approach (e.g. Fournier and Yao 1997; Siemieniako 2010 and 2011).

Several authors defining loyalty have acknowledged that loyalty develops over time, identifying loyalty stages (Dick and Basu 1994; Oliver 1999). For example, Dick and Basu (1994) presented a typology of customer loyalty based on the frequency and quantity of purchase along with customer attitudes. In this deepen understanding of customer loyalty Urban and Siemieniako (2005) recognized customer loyalty motives as an important factor which should analysed by marketers in proposing tactics for building customer loyalty. The measurement of customer loyalty within the relationships is another important aspect Mitręga (2005).

Few researchers have considered loyalty as relational. As such, the relational nature of loyalty can be reflected in the following definition: '*Loyalty is a feeling or an attitude of devoted attachment and affection. This feeling of loyalty tends to imply that a person feels an obligation to persevere with a personal relationship through good and bad times*' (Rundle-Thiele 2005, p. 494). The relational approach recommends that researchers must understand interactions between consumers and marketers, as this interaction influences loyalty (in terms of attitude and behaviors) (Fournier and Yao 1997).

Geiger and Kleinaltenkamp (2015, p. 196) proposed that increasing the value for the customer and creating switching costs for the customer leads to increasing customer loyalty, which is the main goal of business-to-business relationship management. B2B relationship management, including building customer loyalty, is a strategy domain of the company.

Customer loyalty can be considered to be the source of a competitive advantage, as it has a considerable influence on enterprises' performance (Woodruff 1997). In principle, starting

the co-operation that uses a loyalty-based relationship enables both parties to gain mutual benefits and helps to increase competitiveness and reduce transaction costs. Buan and Gilles (1990) point out a series of benefits that result from having loyal customers.

Researches on B2B relationships show that loyal customers initiate – more often and with greater commitment than disloyal customers – co-operation when carrying out business projects (Gil-Saura et al. 2009).

## Research method

Bibliometric methods are more and more popular nowadays as a systematic approach to literature review. The research method used in this paper base on systematic review of scientific literature indexed by the Scopus database published between 2003 and 2017. The research procedure was as follows.

Firstly it was defined and selected the research subject by simultaneously appearance of the words, such as: customer loyalty and business-to-business in publications title, abstracts or keywords. Secondly the search of defined subject was limited to the publication published between 2003 and 2017, which is 15 years. The intention of the author of that paper was to focused on relatively contemporary period. After the list of the scientific publications was generated it was done the reduction of that list through narrowing of further search to the area of 'Business, Management and Accounting' distinguished by Scopus database amongst other scientific areas.

Another stage of the research method was bibliometric analysis, proposed by Scopus database, which was particularly:
(i)  the analysis of the number of articles in relation to the year of publication between 1986 and 2017,
(ii)  the analysis of the authors names, who published most of all works,
(iii) the analysis of the number of articles in relation to the country of origin of their authors,
(iv)  the analysis of the types of documents,
(v)  the analysis of the sources of publications in which it was published most of all works.

Frequency analysis, which was generating the occurrence of keywords indicated by authors was another stage of the analysis. The last stage of the bibliometric analysis was content analysis of interrelations between keywords of selected publications generated for the analysis. The data was extracted within the Excel file from the Scopus database and it was used the VOSviewer software to analyze those data which enables the creation of visualizations of bibliometric networks. The further approach was finalizing the map showing the existing relations between keywords of selected publications dealing with customer loyalty within business-to-business context. The VOSviewer software enabled to define the minimum number of occurrences of keyword frequency, which influence of the general number of keywords which will be taken in interrelationship analysis. The VOSviewer software also facilitated the combining of the analyzed set of data into clusters, which allowed to identify the main topics of research in customer loyalty within business-to-business context.

## Results

The total number of scientific works identified in Scopus data base for the phrase 'customer loyalty' was 7254 (dated na 16th of December 2017). After narrowing the search by adding additional phrase, 'business-to-business' the total number of documents was 1808 documents. By limiting the years till 2003-2017 the number of generated documents for phrases 'customer loyalty' and 'business-to-business' was 1634 items. Finally the search was further limited for one discipline 'Business, Management and Accounting', which resulted in 950 generated documents. Generally, besides the analysis presented on figure 1, all the analysis are presented for the period 2003-2017. The average number of documents, indexed yearly in Scopus database in period 2003-2017, for phrases 'customer loyalty' and 'business-to-business' in discipline 'Business, Management and Accounting', is 63 publications.

The Figure 1 presents the numbers of publications yearly, related to the area of customer loyalty in business-to-business context, in discipline 'Business, Management and Accounting' indexed in Scopus database in years 1986-2017. The total number of documents is 1071

The first works indexed in Scopus database on customer loyalty in business-to-business context limited for 'Business, Management and Accounting' started to appear in the turn of the 80-ties and 90-ties of 20th century. The biggest dynamism of growth of the number of pub-

**Figure 1**

**The numbers of publications related to area of customer loyalty in business-to-business context, in discipline 'Business, Management and Accounting' indexed in Scopus database in years 1986-2017**
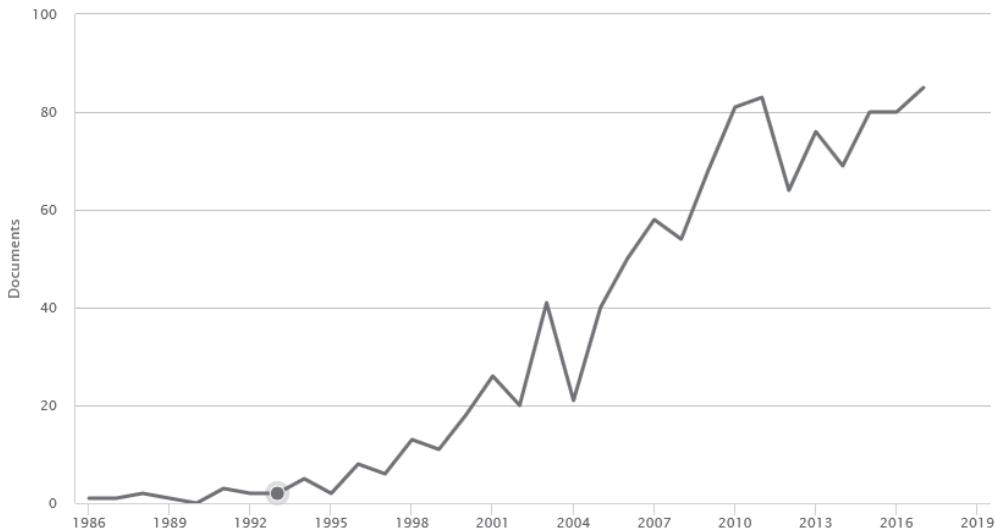


Source: own work on the basis of Scopus database.

lications lasted about 10 years since the beginning of 21st century till 2010. The next 4 years was characterized by decreasing popularity of analized topic and since 2014 it is visible slow growth year by year the number of publications, reaching the highest number in 2017.

The Figure 2 presents the names of 10 authors, who have the most publications indexed in Scopus database on customer loyalty in business-to-business context limited for discipline 'Business, Management and Accounting' in years 2003-2017. The analysis showed two authors, Aksoy L. and Keiningham T.L., who have the maximum number of publications, which is 12 for the first and 10 for the second one. Another 8 distinguished authors' number of publication is between 4 and 6. These 10 authors represent following countries: 5 authors – USA (the first three) and 1 author – Spain, Slovenia, Germany, Great Britain, Denmark.

**Figure 2**

**The names of 10 authors with the greatest number of publications indexed in Scopus database on customer loyalty in business-to-business context limited for discipline 'Business, Management and Accounting' in years 2003-2017**
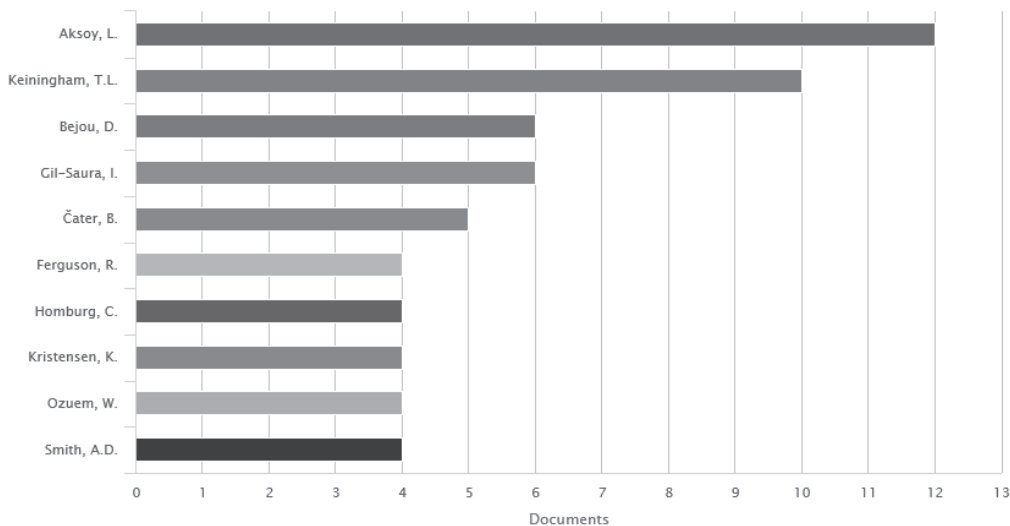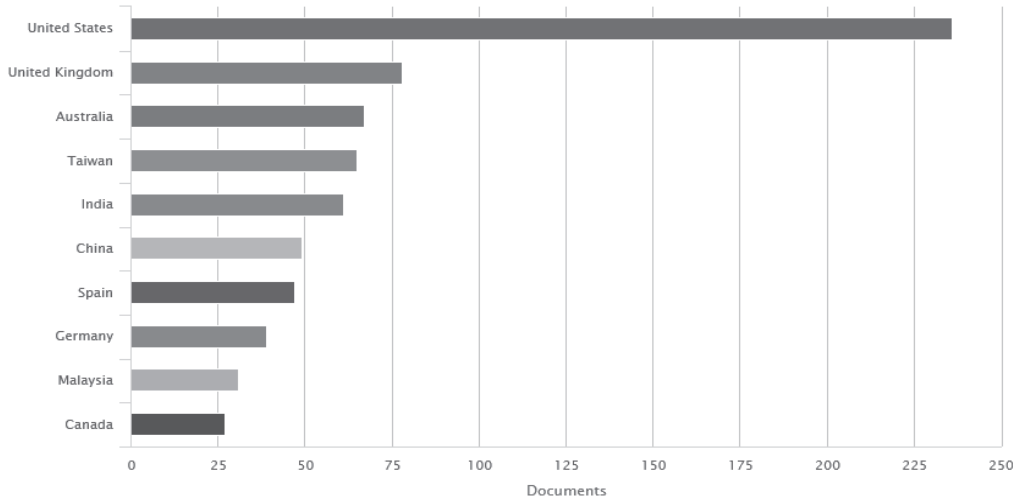


Source: as in Figure 1.

The Figure 3 presents the names of the 10 countries of origin of their authors, in which it was identified the most works according to defined search in Scopus database, as it presented in analysis, which results are visible on Figure 2. The results of the analysis presented on Figure 3 showed the dominance of the USA authors, with the number of almost 240 publications indexed in Scopus database in period 2003-2017. The second and the third place occupied United Kingdom and Australia.
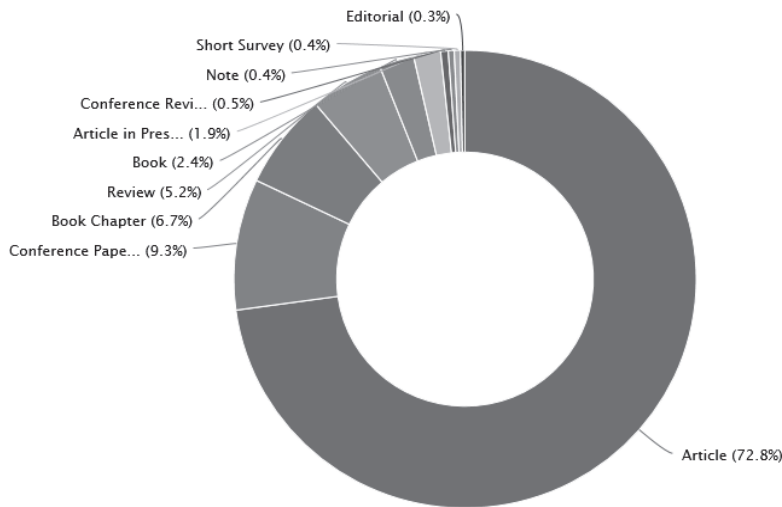
**Figure 3**

**The names of 10 countries of origin of their authors with the most works indexed in Scopus database on customer loyalty in business-to-business context limited for discipline 'Business, Management and Accounting' in years 2003-2017**



Source: as in Figure 1.

**Figure 4**

**Types of documents of publications indexed in Scopus database on customer loyalty in business-to-business context limited for discipline 'Business, Management and Accounting' in years 2003-2017**



Source: as in Figure 1.

When comparing the names of 10 authors distinguished on Figure 2 with countries, in which it was identified the most works in analysed topic (Figure 3) it is visible that 5 authors represent USA, and 1 author for 1 country is visible in: Spain, the UK, Germany, Slovenia and Denmark.On the Figure 4 it is presented the types of documents of publications indexed in Scopus database on customer loyalty in business-to-business context limited for discipline 'Business, Management and Accounting' in years 2003-2017. The most popular type of document is definitely an article with almost 73% of share in total number of 950 documents. The second most popular type is conference paper (9,3%) and the third most popular is book chapter (6,7%).

The total number of identified by VOSviewer keywords within the Scopus database search was 2095. After several trials of generating the keywords' network map through VOSviewer the author of the paper stabilized the search on the assumption of minimum 15 occurrences of keywords, which generated 23 keywords fulfilling this criterion with counts, Figure 5 (two phrases are not visible on the map because of scaling problems).

**Figure 5**

**Map showing the interrelationships between key terms characterizing publications dealing with customer loyalty and business-to-business**
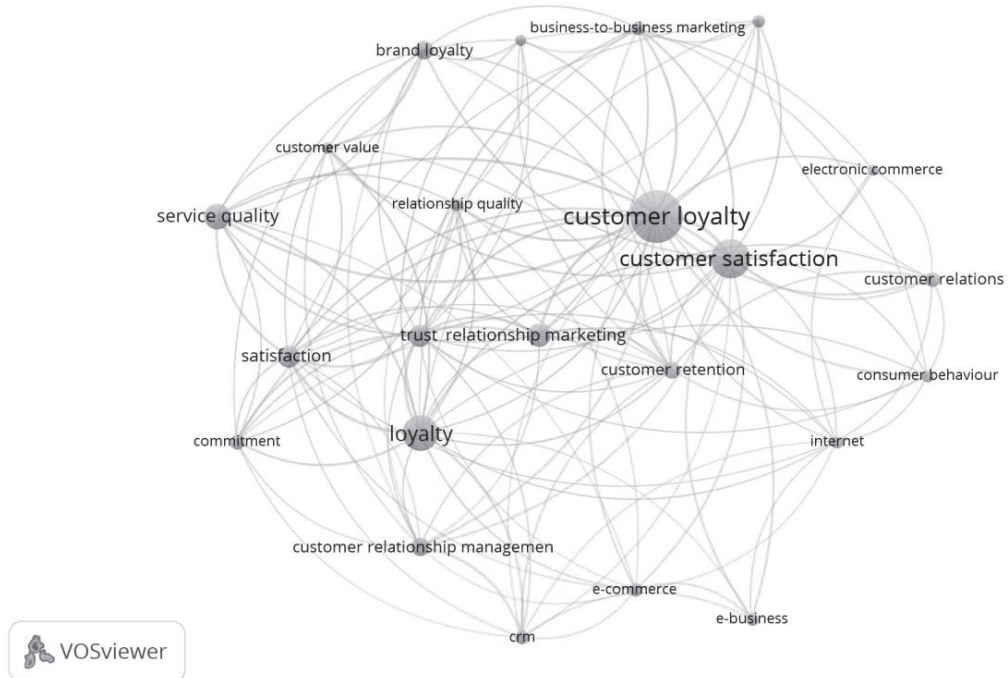


Source: own work on the basis of VOSviewer.

Based on the VOSviewer software it was generated a map of 4 clusters which are coloured differently to differ one from the another (Figure 5). Each cluster consists with the most often appeared keywords within the search in Scopus database (keywords, abstract and title) on the assumption of minimum 15 occurrences of keywords. The phrases belonging to a particular cluster means that given phrases occurred together most often (it does not mean that the phrase does not appear with other terms). The interconnections between the keywords are visible within the clusters and outside of the particular cluster. The VOSviewer software distinguished 23 phrases in these four clusters. In each of four distinguished clusters, it was generated the keywords as follows (based on the distinguished keywords it is proposed the name of each cluster):

- cluster 1 'defining customer loyalty and specificity of business-to-business customer' (7 items): customer loyalty, customer satisfaction, Internet, customer retention, electronic commerce, customer relations, customer behavior,
- cluster 2 'business-to-business customer loyalty antecedents' (6 items): service quality, relationship marketing, loyalty, satisfaction, trust, commitment,
- cluster 3 'marketing strategy for building business-to-business customer loyalty' (6 items): business-to-business marketing, brand loyalty, customer value, relationship quality, brand equity, corporate social responsibility,
- cluster 4 'electronic solutions in managing business-to-business customer loyalty' (4 items): Customer Relationship Management, e-business, CRM, e-commerce.

Proposed names of the clusters reflect subareas of the literature on the customer loyalty.

## Conclusions

The bibliometric analysis of scientific works regarding the issue of customer loyalty in the area of business-to-business allowed to identify four main topics within which it might be qualified all the publications covering this issue. It can be proposed the qualification of new research projects on customer loyalty in business-to-business context to one of the four main topics, named as clusters from 1 to 4.

As practical and research implication it might be stated that the boarders of two clusters make a potential for having interesting research results. From practical point of view it could deliver for managers insightful perspective on the issue of customer loyalty in business-to-business area. An example of joining aspects from cluster 1 and cluster 3 can be a work of Siemieniako and Gębarowski (2016), in which it is presented the connection between defining relational loyalty and two essential marketing concepts, such as relationship marketing management and trade fair activity management. Future research may focus on looking for the research gaps on the boarders of two different clusters.

The limitations of this analysis is connected to focusing only on publications listed within the Scopus database. The future direction of research might be broadening of bibliometric analysis through using other databases of scientific publications, such us: Web of Science, Elsevier, Emerald or EBSCO.

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## Analiza bibliometryczna badań naukowych w odniesieniu do lojalności klientów w kontekście *business-to-business*

### Streszczenie

Zagadnienie lojalności klientów od dawna było badane w literaturze marketingowej. Literatura z zakresu marketingu *business-to-business* rozpoznała lojalność klientów jako istotną kwestię determinującą sukces przedsiębiorstw. Celem artykułu jest identyfikacja obszarów badań naukowych, w których podejmowana jest tematyka lojalności klientów w kontekście działalności *business-to-business* na podstawie analizy danych bibliometrycznych publikacji naukowych indeksowanych w bazie Scopus w latach 2003-2017. W szczególności analizie poddano prace naukowe z zakresu lojalności klientów w obszarze *business-to-business*, których autorzy realizowali swoje badania w ramach dyscypliny „Biznes, Zarządzanie i Rachunkowość", wyróżnionej przez Scopus.

**Słowa kluczowe**: lojalność klientów, *business-to-business*, analiza bibliometryczna, Scopus, VOSviewer.

**Kody JEL:** L140, M310

## Библиометрический анализ научных исследований по отношению к лояльности клиентов в контексте *business-to-business*

### Резюме

Вопрос лояльности клиентов уже издавна изучается в литературе по маркетингу. Литература в области маркетинга типа *business-to-business* выявила лояльность клиентов в качестве существенного вопроса, определяющего успех предприятий. Цель статьи – выявить области научных исследований, в которых затрагивается тематика лояльности клиентов в контексте деятельности типа *business-to-business* на основе анализа библиометрических данных научных публикаций, индексированных в базе Scopus в период с 2003 до 2017 года. В особенности анализ охватил научные работы в области лояльности клиентов в сфере *business-to-business*, авторы которых осуществляли свои ис-

следования в рамках дисциплины «Бизнес, управление и бухгалтерия», выделенной базой Scopus.

**Ключевые слова**: лояльность клиентов, *business-to-business*, библиометрический анализ, Scopus, VOSviewer.

**Коды JEL:** L140, M310

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