

Transfer pricing: A bibliometric analysis of the international literature

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ABSTRACT

The decentralization of decision-making to ensure faster and more efficient process control has become commonplace among companies in the current market. The performance of responsibility centers is periodically assessed and a decisive factor in this assessment is the correct definition of transfer prices for products and services. Thus, the aim of the present study is to search for and analyze studies conducted from 2000 onwards regarding transfer pricing as a tool for performance assessment using a process known as ProKnow-C (Knowledge Development Process – Constructivist), whose objective is to build knowledge from a constructivist perspective based on a researcher's interests and limitations. The result was a bibliographic profile of 14 articles. The bibliographic profile was analyzed in order to identify the scientific recognition of the articles, authors referenced and the most prominent journals in terms of publications on the topic under study.

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1. Introduction

As companies grow and master several production chain processes through vertical integration, there is a need to decentralize decision-making (HORNGREN, SUNDEM; STRATTON, 2004). By opting for decentralization, companies delegate decision-making, that is, they give tactical-level managers the autonomy to make and implement decisions in their responsibility centers, which tends to produce more timely responses (HANSEN; MOWEN, 2010).

By contrast, the goals of divisional managers may move away from the company's overall objective due to information asymmetry and conflicts of interest between major players and agents (BALDENIUS, 2000). Thus, senior management generally monitors the progress of each decentralized unit, typically divided into responsibility centers, in order to provide incentives to managers and assess performance based on the results presented.

From this perspective, transfer pricing, defined by Jiambalvo (2009, p. 258) as "the price used to evaluate internal transfers of products and services",

is one of the most important organizational management practices (OYELERE; TURNER, 2000; JOHSON, 2006, ERICKSON, 2012). This is because it influences the performance assessment of units, since it influences the distribution of revenue among the responsibility centers, affecting the results, profitability and return on investment of both units involved in the transaction (ATKINSON *et al.*, 2000; GJERDRUN; SHAH; PAPAGEORGIOU, 2002 HANSEN; MOWEN, 2010; BALDENIUS; MELUMAD; REICHELSTEIN, 2004).

According to Coelho (2000), research on transfer pricing as a performance assessment tool began in the 1950s, with the oldest study dating to 1956, conducted by the United States' National Association of Accountants (NAA). At the same time, other theoretical articles were published on the theme based on a microeconomic approach. Coelho (2000) also reports that organizational structural changes occurred in the following decade, with management-related research turning towards decentralization

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and, as a result, transfer pricing became even more widespread.

As such, transfer pricing as an instrument in the performance assessment of decentralized company units has been researched for more than 60 years and must therefore have advanced in terms of content. Thus, using a constructivist method to select a bibliographic profile, this study aims to highlight the profile of research on the theme conducted in recent years with a view to guiding new research in the field. The study proposes to answer the question: What are the characteristics of the most recognized research on transfer pricing as a tool for performance assessment.

To answer this question, this paper aims to search for and analyze studies conducted from 2000 onwards regarding transfer pricing as an instrument for performance assessment, with the following specific objectives: (i) select a scientifically recognized international bibliographic profile on the issue of transfer pricing; and (ii) conduct a bibliometric analysis of the bibliographic profile to identify the most common methods, as well as the most prominent authors, journals, articles and keywords within the area of interest.

This study is justified by the importance of the theme, since research in the field helps companies in the process of decentralizing and monitoring responsibility centers. Thus, researchers need a starting point to develop new studies in the area by identifying important journals and authors on the theme, the perceived scientific importance attributed to the investigations, and defining the most frequently used methodologies.

To achieve these objectives and answer the research question, this study is divided into five sections. In addition to the introduction, section 2 addresses the theoretical framework, section 3 describes the research methodology, and the fourth section contains the results and discussion. Section 5 presents the researchers' final considerations. This is followed by the references used to substantiate this study.

2. Theoretical Foundation

This section addresses the theoretical framework that introduces the main concepts related to this theme and is divided into two parts: i) Decentralization and performance assessment,

involving decentralization and the evaluation of responsibility centers; and, ii) Transfer pricing, encompassing the definitions and management methods in the literature.

2.1 Decentralization and Performance Assessment

When commencing operations companies tend to centralize decision-making; however, as they grow and become more complex, with administration becoming increasingly difficult, they feel the need to decentralize this responsibility (MAHER, 2001). Horngren, Foster and Datar (1997) characterize the authority delegated to low-level managers as the essence of the decentralization process. Decentralization is therefore the "delegation of the freedom to make decisions. The lower the level of the organization with this freedom in place, the greater the decentralization" (HORNGREN, 2000, p. 219), as shown in Figure 1:

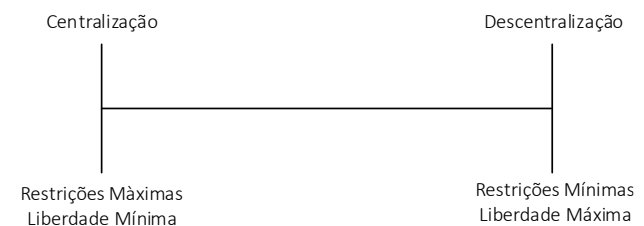


Figure 1: Centralization x Decentralization

Source: Adapted from (Horngren, 2000, 219). **Note:** Centralização = Centralization; Descentralização = Decentralization; Restrições máximas = Maximum restrictions; Restrições mínimas = Minimum restrictions; Liberdade mínima = Minimum freedom

Most companies are neither fully centralized nor fully decentralized (JIAMBALVO, 2009; GARRISON; NOREEN; BREWER, 2007; HORNGREN; FOSTER; DATAR, 1997; ATKINSON *et al.*, 2000). Figure 1 shows the gap between the centralization and decentralization of decision-making. Companies can be at different points of the spectrum and therefore depend on the freedom given by strategic level managers to tactical level managers to make decisions.

The benefits of decentralization as highlighted by Horngren, Foster and Datar (2000) include a better ability to respond to local needs, faster decisions, increased motivation, aiding management development and learning, and improving the vision of managers. The disadvantages cited by the same authors are the potential for inconsistent decisions, where the manager of one division may benefit his/her own unit and compromise the company's

overall result, as well as duplicating activities, reduced loyalty to the organization as a whole, and an increase in the cost of obtaining information.

A common problem in decentralized companies is coordinating activities between the divisions in order to efficiently allocate resources within the organization. This means that when responsibility is delegated to lower levels, companies need to assess the decisions made and their impact (GÖX, 2000). Responsibility centers are typically used to evaluate the performance of each division or manager. These can either be cost, revenue, result or investment centers (HANSEN; MOWEN, 2010).

In a cost center managers exercise control and are only responsible for the costs incurred, while revenue centers are solely responsible for generating sales (GARRISON; NOREEN; BREWER, 2007; ATKINSON *et al.*, 2000). Profit centers are defined by Atkinson *et al.* (2000, p. 625) as “responsibility centers where managers and staff control both revenue and the cost of the products and services they produce”. Investment (result) centers, in turn, are responsible for and assessed on operations pertaining to costs, revenue and investments (GARRISON; NOREEN; BREWER, 2007).

Performance assessment based on these responsibility centers therefore requires a means of transferring products or services from one division to another so that the price charged for the transaction truly reflects the value added to the item at each stage of the process. This is the role of internal or managerial transfer pricing.

2.2 Internal Transfer Pricing

The price used to evaluate internal transfers of a product or service is defined as the transfer price (HORNGREN; FOSTER; DATAR, 1997; JIAMBALVO, 2009; HANSEN; WOMEN, 2010; GRAF; KIMMS, 2013). Atkinson *et al.* (2000, p. 633) explain that transfer pricing is “a set of regulations that a company uses to distribute joint revenue among responsibility centers”.

According to Garrison and Norren (2001), the main objective of transfer pricing is to align the attitudes of managers with the needs of the company as a whole. Blocher *et al.* (2007) add that transfer pricing tends to make managers feel more motivated and provides companies with a basis to evaluate the

performance of each manager and compensate them fairly.

The transfer of goods between the divisions of a company therefore generates “revenue for the selling subunit and a cost acquisition for the buyer” (HORNGREN; FOSTER; DATAR, 1997, p. 639). According to Warren, Reeve and Fess (2008, p. 290), “since transfer prices affects the goals of both divisions, defining them is a priority for divisional managers”. The three most common methods used to define internal or managerial transfer prices are market price, negotiated price, and cost price (BALDENIUS; REICHELSTEIN, 2006).

Market price can be applied between divisions when there is an intermediary market, that is, external consumers for the product or service transferred (GARRISON; NOREEN, 2001; BLOCHER *et al.*, 2007). However, “market prices are not used because they do not exist, cannot be applied or are impossible to determine” (HORNGREN, 2000, p. 221).

Atkinson *et al.* (2000, p. 634) report that “the market price provides an independent estimate of the product or service transferred and stipulates how each profit center contributed to the company’s total profit from the transaction”.

The negotiated price is the method used when the managers of two responsibility centers (the seller and buyer) meet to discuss the terms and conditions of the transfer (GARRISON; NOREEN, 2001; BLOCHER *et al.*, 2007). “Negotiated transfer prices reflect the inherent perspective of responsibility, since each division is ultimately responsible for the transfer price they negotiated” (ATKINSON *et al.* 2000, p. 638).

Internal transfers can be made based on the costs of the selling division, in which case the transfer is said to be made at cost price. When applied, this method of transferring goods and services means the price can be set in a number of ways, although the most widely used formats are: real cost, standard cost, standard cost with a contribution margin, marginal cost and shadow price (BEUREN; GRUNOW; HEIN, 2010).

Price transfer is said to be administered when managers arbitrate the value applied in the transfer. This model is criticized because it ultimately removes the autonomy and motivation of the managers involved in the transaction (ATKINSON *et al.* 2000).

Although the cost-based transfer price has been identified as the most widely used (MATSUI, 2012),

there is no consensus on which method should be applied since a number of factors can influence this decisions, including the external market, the company's idle capacity, motivation and the variable remuneration offered to managers, among others.

3. Methodological Procedures

3.1 Methodological Framework

The methodological framework presents the procedures used to achieve the final objective of the study (ENSSLIN; ENSSLIN; PACHECO, 2012). At the outset, researchers were unaware of the possible results of the study and as such, certain databases were searched for information in order to reach a conclusion on the subject studied. The results found were not generalized, thus characterizing the research approach as inductive (IUDÍCIBUS, 2004).

This is a theoretical and illustrative article, since it presents the steps taken to compile the bibliographic portfolio and build knowledge on transfer prices (ALAVI; CARLSON, 1992). The research is qualified as descriptive because it describes the characteristics of a Bibliographic Portfolio via bibliometrics (RICHARDSON, 2007).

Data were collected based on primary and secondary sources; primary because the study outlines and article selection criteria were imposed by the researcher, and secondary because the articles were researched and taken from scientific databases made available by CAPES (RICHARDSON, 2007). First, a qualitative approach is used to outline, select and qualify the bibliographic portfolio and its references, followed by the application of quantitative methods to analyze the data via bibliometrics.

With respect to technical procedures, a literature review was conducted to identify the most relevant papers on the topic under study (GIL, 1999; LAKATOS; MARCONI, 2006). The Knowledge Development Process – Constructivist method (ProKnow-C), developed by the Laboratory for Multi-Criteria Decision-Making Methods (LabMCDA) was applied as an intervention instrument and aims to build knowledge from a constructivist perspective based on a researcher's interests and limitations (ENSSLIN et al., 2013).

3.2 Knowledge Development Process - Constructivist (Proknow-C)

The ProKnow-C process consists of four stages (ENSSLIN; ENSSLIN; PINTO, 2013):

1. Selecting a portfolio of articles on the research theme;
2. Bibliometric analysis of the portfolio;
3. Systemic analysis; and,
4. Defining the research question and objective.

However, this study applied only the first two phases of ProKnow-C, namely selecting a portfolio of articles on the research topic, which involves a limited set of scientifically recognized publications whose title, abstract and content are in line with the subject studied according to the researcher's perception, and bibliometric analysis of the portfolio (BORTOLUZZI et al., 2011; LACERDA; ENSSLIN; ENSSLIN, 2012).

4. Presentation and Discussion of the Results

This section describes the procedures applied to select the bibliographic portfolio (based on ProKnow-C) and the bibliometric analysis of the selected profile.

4.1 Selection of the Bibliographic Portfolio

As mentioned in the methodological procedures the bibliographic profile was selected in three stages: (i) selecting the raw article database; (ii) filtering the raw article database; and, (iii) testing the representativeness of the primary portfolio.

4.1.1 Selecting the raw article database

As highlighted in the methodology, in order to select the bibliographic portfolio keywords must be chosen to search for publications on the databases. Since this study aims to analyze transfer pricing as a performance assessment tool, two search categories were selected: transfer pricing and performance assessment.

The keyword established for the first category was "*transfer price**", using an asterisk to enable detection of possible variations of the word "*price*".

The initial keywords defined for the second category were: "*performance measurement*", "*performance evaluation*", "*performance assessment*" and "*performance measure indicators*".

However, a short test run combining the two search categories on several of the databases located

less than 100 articles, including duplicate and irrelevant articles and those not scientifically recognized. This number was considered small and as such, a second search was attempted separating the terms in the second category, which produced a considerably higher number of articles. The combined keywords are shown in Figure 2.

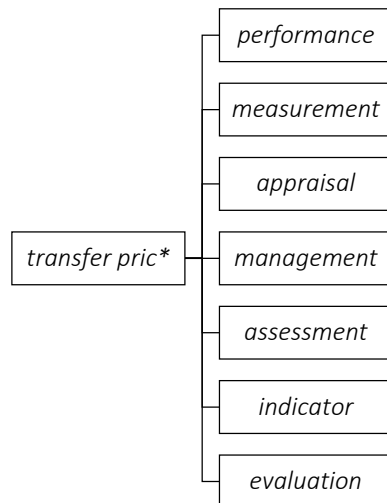


Figure 2: Keyword combination
Source: Compiled by the authors (2014).

After defining the search categories and keywords, the next step was to establish which databases to search.

The first selection criterion was for databases to be available on the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES). Among the portal's databases for ten areas of knowledge, only that related to Applied Social Sciences was selected, with business administration, public administration and accounting chosen as subareas and accounting for a total of 68 databases.

Of these, 29 were selected that contained at least the references and abstracts of the articles. After accessing each database we excluded those whose search engine did not allow the use of Boolean expressions or searching by title, abstract or keyword. This left 23 databases for article selection, with only 10 producing results, namely EBSCO, Emerald, Gale Academic Onefile, ISI Web of Knowledge, JSTOR, Proquest, PsycArticles, ScienceDirect, Scopus and Wiley. The most prominent of these were: ISI Web of Knowledge with 92 articles; and Scopus, with 115 papers. A total of 429 articles were found, which were recorded in the so-called raw articles database. In order to select current articles, the time period

designated for the database search was limited to 2000 to 2014.

To ensure no keyword was forgotten when defining the search categories and keywords, an adherence test was conducted between the keywords found in a sample of selected articles. Thus, five articles whose titles were in line with the research topic were randomly chosen for comparison against the keywords established for selection of the raw articles database, with no necessary keyword identified.

As such, after selecting the raw portfolio, we began the process of filtering the raw articles database to compile the primary portfolio.

4.1.2. Filtering the Raw Articles Database

The first task in the filtering process involved importing references from the articles into *Endnote* bibliography management software (THE THOMSON, 2008), making filtering easier and automated. Thus, the software enabled papers to be excluded and identified duplicate files. During this phase 30% of articles were eliminated for being redundant, leaving 300 articles. It was subsequently noted that despite selecting the option to search exclusively for articles, 38 references had been produced for indexes, patents, and books, which were also excluded from the database. This left 262 articles for analysis.

Next, we checked for alignment of the titles and excluded 186 articles. The 76 remaining papers were analyzed for scientific recognition. For the purposes of this study, scientific recognition was based on the number of citations received by each article. This process was conducted using Google Scholar, which indicates the number of citations per article (ENSSLIN et al., 2015).

The authors established that, among the articles approved in the previous stages, those responsible for 90% of the total citations would be included. As such, the 18 articles accounting for 90% of total citations were kept in the K Repository (databases of non-repeated articles with titles aligned and scientific recognition) and the remaining 58 papers were allocated to the P Repository (database of non-repeated articles with aligned titles and unconfirmed scientific recognition). The latter will subsequently undergo reassessment.

The K Repository articles, which already had confirmed scientific recognition, were analyzed for

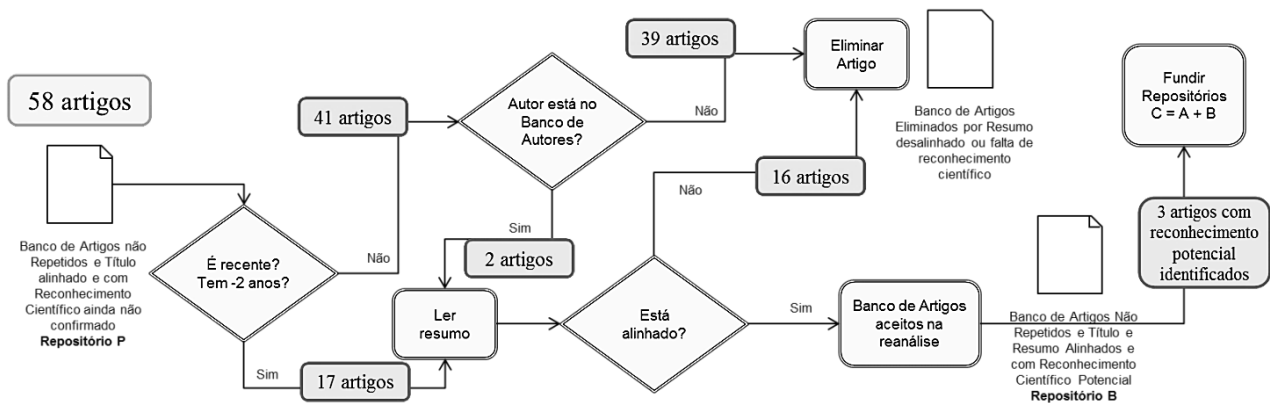


Figure 3: Filtering process for the raw articles database
Source: Compiled by the authors (2014).

alignment of the abstract in order to exclude those not related to the research topic. Eleven articles were excluded and the other 7 discarded. These 11 articles were selected for the R Repository and the authors of each article were identified for inclusion in the Authors Databases for use in the analysis of Repository P.

The 58 articles with unconfirmed scientific recognition underwent two additional analyses. The first evaluated the year of publication of the articles, considering that scientific recognition had not been secured owing to the short amount of time available for citation, and the second determined whether the articles were written by recognized authors, that is, if they were registered in the Authors Database. The first assessment identified 17 studies considered

recent, with publication dates in or after 2012, while the second detected only 2 articles. After reading the abstracts of these 17 papers, only three were considered in keeping with the research topic (aligned), all three of which are registered in the B Repository. The process involved in compiling Repository B from Repository R is shown in Figure 3.

After filtering Repository B, articles from the A and B Repositories were included to form Repository C, which had to be read in full to determine their alignment with the research topic. The 14 articles were freely accessed and read, with 11 deemed fully compliant and included in the primary portfolio, thus completing the filtering process of the raw articles database.

Table 1
 Articles selected for the bibliographic portfolio

Authors	Title Article's	Year
P. B. Oyelere; J. D. Turner	A survey of transfer pricing practices in UK banks and building societies	2000
T. Baldenius	Intrafirm trade, bargaining power and specific investments.	2000
R. F. Göx	Strategic transfer pricing, absorption costing, and observability	2000
C. J. Vidal; M. Goetschalckx	Global supply chain model with transfer pricing and transportation cost allocation	2001
J. Gjerdrum; N. Shah; L. G. Papageorgiou	Fair transfer price and inventory holding policies in two-enterprise supply chains	2002
T. Baldenius; N. D. Melumad; S. Reichelstein	Integrating managerial and tax objectives in transfer pricing	2004
S. Y. Lakhali	An operational profit sharing and transfer pricing model for network-manufacturing companies	2006
N. B. Johnson	Divisional performance measurement and transfer pricing for intangible assets	2006
T. Baldenius; S. Reichelstein	External and internal pricing in multidivisional firms	2006
A. W. Y. Lo; R. M. K. Wong; M. Firth	Tax, financial reporting, and tunneling incentives for income shifting: An empirical analysis of the transfer pricing behavior of Chinese-listed companies	2010
T. Pfeiffer, U. Schiller; J. Wagner	Cost-based transfer pricing	2011
K. Matsui	Cost-based transfer pricing under R&D risk aversion in an integrated supply chain	2012
G. M. Erickson	Transfer pricing in a dynamic marketing-operations interface	2012
M. Graf; A. Kimms	Transfer price optimization for option-based airline alliance revenue management	2013

Source: Compiled by the authors (2014).

4.1.3 Primary Portfolio Representativeness Test

References from the primary portfolio were extracted to establish the relationship between all its scientific articles. Next, the references were checked according to the previously defined time period, that is, later than 2000. This produced a total of 80 articles, which were analyzed for scientific recognition. Articles that represented 80% of the total citations were excluded, leaving a total of 28 articles, 2 of which were already part of the portfolio. The abstracts and entire articles were evaluated for alignment with the research topic, concluding that 23 did not meet this criterion. This process included additional articles in the primary portfolio, henceforth considered the final Bibliographic Portfolio.

Table 1 shows the articles, authors and year of publication of the papers chosen for the bibliographic profile of this study. The portfolio consists of 15 articles on the theme of transfer pricing for performance assessment.

4.2. Bibliometric Analysis

Bibliometrics is the quantitative analysis of portfolio data, considering journals, keywords, citations, authors, databases, and the articles themselves (VILELA, 2012). Bibliometric analysis considered the 14 articles from the bibliographic profiles and their 95

references, delimited according to the same selection criteria applied for the articles, that is, those published from 2000 onwards.

4.2.1 Scientific Recognition

Highlighting scientific recognition makes it possible to identify articles used as the basis for new research on the theme. Figure 4 shows scientific recognition based on the number of citations of the articles selected for the bibliographic profile. The number of citations was based on a search using Google Scholar, with the first article receiving more citations than the others. The article entitled “Global supply chain model with transfer pricing and transportation cost allocation”, written by Vidal and Goetschalckx in 2001, has 275 citations, followed by the 2004 study by Baldenius, Melumad and Reichelstein, with 115 citations. The remaining articles range between 3 and 76 citations. The four articles with less than 10 citations (the first four in Group 1) were published less than two years ago, which explains the low number of mentions.

Analysis of the number of citation revealed that 6 of the 14 articles in the bibliographic profile were not referenced. Five of these are in Group 1 (Figure 4), that is, they also receive few citations overall. Moreover, among the articles in Group 1, only “Cost-based transfer pricing” was cited in the other articles

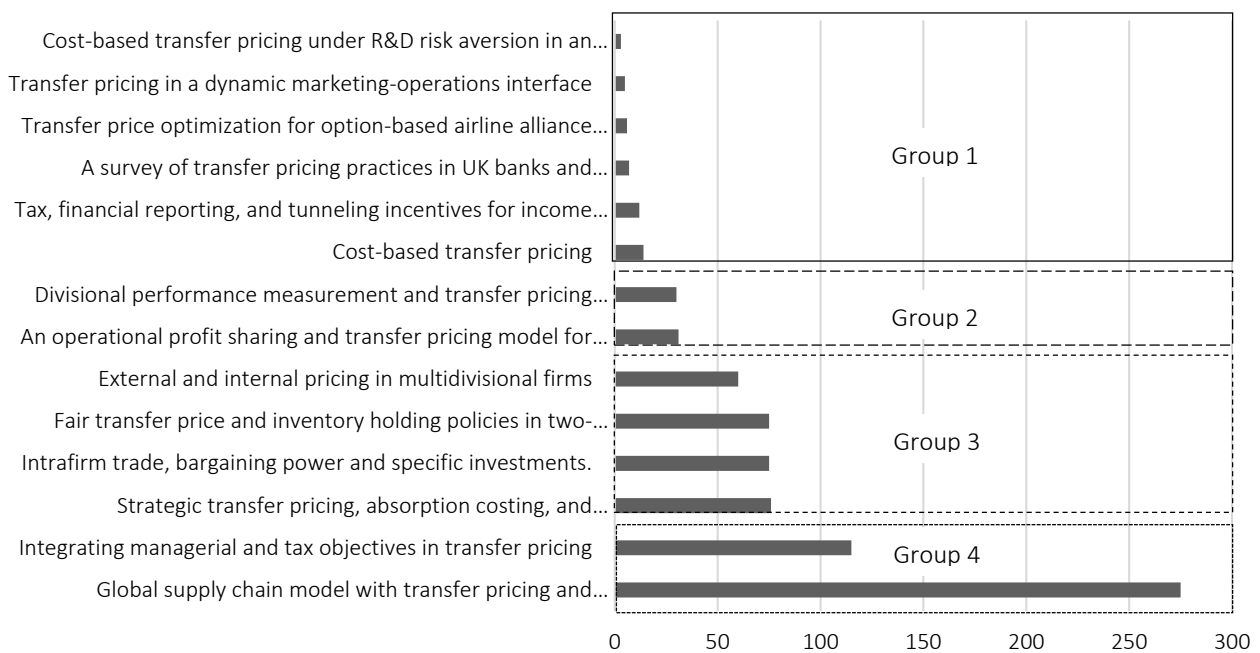


Figure 4: Scientific recognition of the article from the bibliographic portfolio
 Source: Compiled by the authors (2014).

from the bibliographic portfolio. Another article not cited was “An operational profit sharing and transfer pricing model for network-manufacturing companies”.

Among the articles cited within the bibliographic portfolio, those with the greatest recognition are “External and internal pricing in multidivisional firms” e o “Integrating managerial and tax objectives in transfer pricing”, with three citations each, precisely the papers that address transfer pricing within and outside companies. Those with two citations are *Fair transfer price and inventory holding policies in two-enterprise supply chains*, *Global supply chain model with transfer pricing and transportation cost allocation* and *Intrafirm trade, bargaining power and specific investments*, followed by *Cost-based transfer pricing*, *Divisional performance measurement and transfer pricing for intangible assets*, *Strategic transfer pricing*, *absorption costing*, and *observability* with only one citations.

The scientific recognition of the articles indicates that they are references for further research in the area, since they were well received by the academic community. As such, researchers intending to conduct studies on the same topic can use the articles with the highest number of citations as a basis for their own studies.

4.2.2 Author Participation

The 14 articles have a total of 23 authors, the most prolific of whom were Tim Baldenius, with 3 articles and Stefan Reichelstein with 2. It is important to investigate the level of participation by authors in the theme under study in order to determine who is an authority on the subject, identify additional studies and monitor future research by those same authors.

Figure 5 demonstrates the level of participation by authors in the portfolio article as well as their references.

Figure 5 shows the significant contribution of the two authors previously mentioned authors to the theme. The 95 referenced articles have 189 authors; however, the most prominent of these are Baldenius and Reichelstein, with 5 publications each. Other noteworthy authors referenced are Firth, Göx, Lo, Matsui, Pfeiffer and Schiller.

An analysis was conducted to identify what university authors were affiliated with on the date of publication and what country they lived, in order to

determine whether the most recognized articles are concentrated in a specific university or country. Table 2 shows that the authors of the portfolio articles are from different universities. With regard to their country of residence, the countries with the highest number of authors in the profile are the United States (6 authors) and the United Kingdom (4 authors). Nevertheless, Table 2 indicates a range of different countries, confirming the topic’s global relevance.

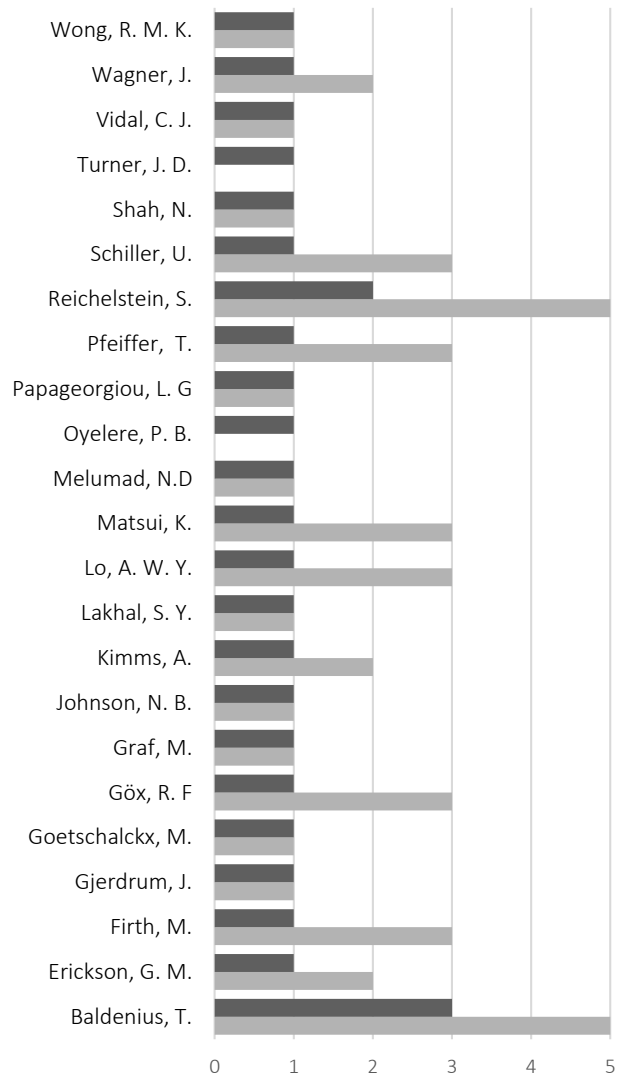


Figure 5: Level of participation by authors in the portfolio article as well as their references

Source: Compiled by the authors (2014).

An assessment of the articles selected for the profile also found that all the studies suggest models to improve the selection and use of transfer pricing. Thus, it can be inferred that these articles may have achieved greater scientific recognition, represented here by number of citations, due to the model proposed in the research.

Table 2
University and country of the authors from the bibliographic portfolio

Author	University	Country
Baldenius, T.	Columbia University	United States
Erickson, G. M.	University of Washington	United States
Firth, M.	Lingnan University	China
Gjerdrum, J.	Imperial College of Science, Technology and Medicine	United Kingdom
Goetschalckx, M.	School of Industrial and Systems Engineering	United States
Göx, R. F.	University of Magdeburg, Faculty of Economics and Management	Germany
Graf, M.	University of Duisburg–Essen,	Germany
Johnson, N. B.	University of California	United States
Kimms, A.	University of Duisburg–Essen	Germany
Lakhal, S. Y.	University of Moncton	Canada
Lo, A. W. Y.	Lingnan University	China
Matsui, K.	Kobe University	Japan
Melumad, N.D	Columbia University	United States
Oyelere, P. B.	Lincoln University	New Zealand
Papageorgiou, L. G	University College London	United Kingdom
Pfeiffer, T.	University of Vienna	Austria
Reichelstein, S.	Stanford University	United States
Schiller, U.	University of Bern	Switzerland
Shah, N.	Imperial College of Science, Technology and Medicine	United Kingdom
Turner, J. D.	Queen's University	United Kingdom
Vidal, C. J.	Universidad del Valle	Columbia
Wagner, J.	University of Vienna	Austria
Wong, R. M. K.	University of Hong Kong	China

Source: compiled by the authors (2014).

4.2.3 Use of Keywords

Despite centering on transfer pricing and performance assessment, the articles in the bibliographic profile largely propose different methods of transfer pricing within or between companies. As such, although the key topic is managerial transfer pricing, this is applied differently in a range of companies. For this reason, only the keyword “*transfer price*” and its variable “*transfer pricing*” were found in high numbers, present in 9 of the 14 articles.

The remaining keywords defined at the beginning of the search process were not repeated. This analysis confirms the keywords initially defined since no relevant keyword emerged for an additional search.

As such, it was concluded that researchers interested in studying this topic on an international level should perform a reference search using the same keywords.

4.2.4 Degree of Relevance of the Journals

The representativeness of the journals in the bibliographic profile indicates where the articles on a

researcher’s topic of interest are published. Thus, Figure 6 shows the most relevant articles on transfer pricing for performance measurement among those selected for the bibliographic portfolio.



Figure 6: Representativeness of the journals in the bibliographic profile

Source: compiled by the authors (2014).

As per Figure 6, the most relevant journals on the theme are European Journal of Operational Research and Review of Accounting Studies, with the former accounting for 4 and the latter for 3 of the articles, that is, these two journals alone represent 46.7% of the articles selected. The International Journal of Production Economics published 2 articles, while the remaining journals contained only one of the portfolio articles.

Figure 7 shows the representativeness of the journals in both the bibliographic profile and the references.

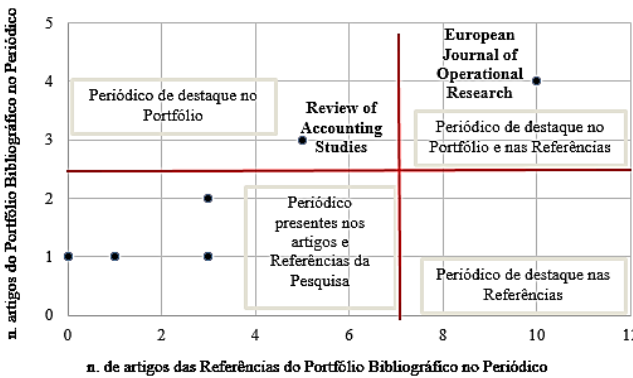


Figure 7: Representativeness of the journals in the bibliographic profile and references
Source: compiled by the authors (2014).

The same analysis of the 95 portfolio references identified the most relevant journals as the European Journal of Operational Research (10 articles), Review of Accounting Studies (5 articles) and the Journal of Accounting and Economics (5 articles). As shown in Figure 7, the European Journal of Operational Research is the most representative in terms of transfer pricing as a tool for performance assessment, considering the analysis of portfolio

article and references. The Review of Accounting Studies is particularly prominent in the portfolio.

Another interesting point for evaluation related to journals is their classification category and ranking in Journal Citation Reports (JCR), that is, ISI Web of Knowledge ranks journals and classifies them into quartiles in ascending order according to their JCR impact score. Next, the total number of journals classified in the same category is divided by four to form quartiles, where journals with the highest impact factor in each category are in the first quartile.

Among the 79 journals classified in the Operations Research & Management Science category by ISI Web, the European Journal of Operational Research has the ninth highest JCR, qualifying it as a first quartile journal and emphasizing its relevance in the category. Review of Accounting Studies is ranked ninth out of 89 journals from the Business, Finance category, also in the first quartile. The Journal of Accounting and Economics is in two categories, namely Business & Finance and Economics, occupying second position in the first category and fourth in the second, thus also falling under the second quartile.

Figure 8 shows the JCR of journals from the bibliographic profile.

As shown in Figure 8, journals with the highest impact factor (according to the JCR) are the Accounting Review and Journal of Accounting Research, with only one article selected in each of the journals. Next, and still within Group 2, the Journal of Accounting Research contains two of the portfolio articles and the European Journal of Operation published 4, with the highest number of articles from the portfolio. Management Accounting Research and

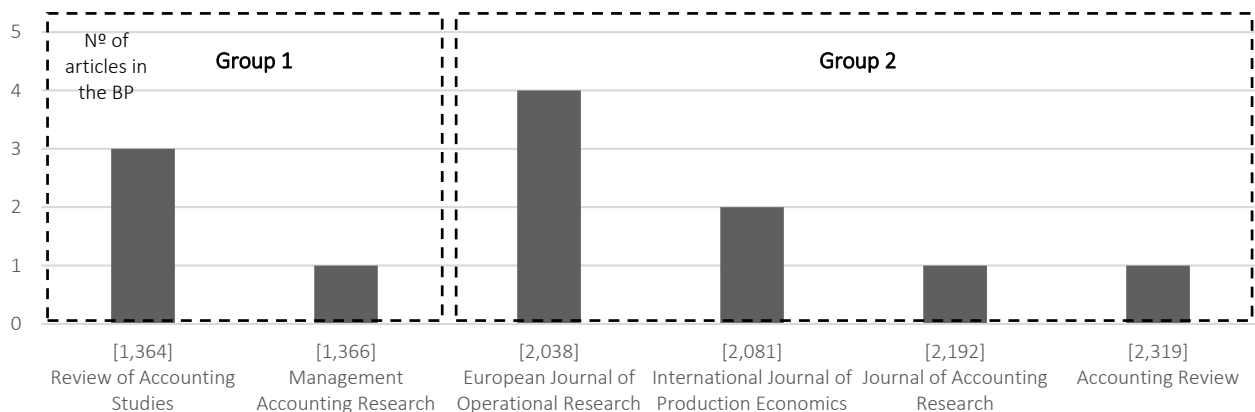


Figure 8: JCR of journals from the bibliographic profile between brackets
Source: Compiled by the authors (2014).

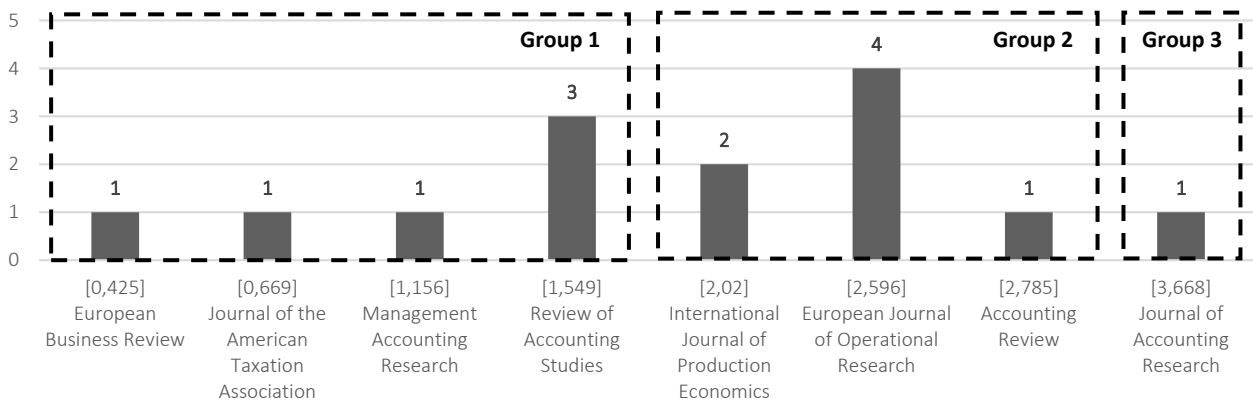


Figure 9: SJR of the journals from the bibliographic profile between brackets

Source: Compiled by the authors (2014).

Review Accounting Studies are in Group1, that is, the group with the lowest impact factor among journals. Furthermore, two of the journals (European Business Review e Journal of the American Taxation Association) have no JCR and are therefore not listed in Figure 8.

Groups were defined according to JCR impact. Journals with a JCR score below 2 were classified in Group 1 and those with higher scores in Group 2.

Scientific Journal Rankings (SJR) is a similar indicator to the JCR in that it analyzes journals, but using different indicators. As such, it is necessary to consider both in order to identify the journals' status in each of the quality rankings. Journals that did not feature in the JCR are present in the SJR, both in set 1, that is, with the lowest impact factors in relation to journals from the portfolio.

In Figure 9, the groups were divided into three categories. Group 1 represents journals with an SJR lower than 2, while Group 2 contains journals with a score higher than 2 and journals in Group 3 score higher than 3.

It was noted that the most prominent journals in the JCR are also most relevant in the JCR. However, the journals with the highest number of portfolio articles have the best impact factor when analyzing the SJR. This suggests better quality articles in these journals and a possible improvement in their impact factor in the coming years.

5. Final Considerations

The present study aimed to search for, select and analyze a bibliographic profile of studies conducted from 2000 onwards centered on transfer pricing for

performance assessment using a constructivist process called ProKnow-C (Knowledge Development Process – Constructivist).

Bibliometric analysis of the articles selected established the scientific recognition of the articles, the importance of authors to the journals linked to the theme addressed here and the keywords used, as well as the relevance of journals that publish articles on transfer pricing and performance measurement.

With regard to scientific recognition, the most relevant article in the bibliographic profile is *Global supply chain model with transfer pricing and transportation cost allocation*, with 275 citations. Analysis of the representativeness of articles from the bibliographic profile found that 9 of the articles selected had been cited by at least one of the studies that also featured in the references. Portfolio articles that received the highest number of references were those addressing both the physical and managerial aspects of transfer pricing: *External and internal pricing in multidivisional firms* and *Integrating managerial and tax objectives in transfer pricing*, with three citations each.

Tim Baldenius and Stefan Reichelstein were the most relevant authors for the topic studied, evident on analysis of the articles selected for the bibliographic profile and the references. Assessment of the keywords used revealed that the only one frequently present was *transfer price* and its variation *transfer pricing*. The remaining keywords featured only once in articles from the bibliographic profile because despite focusing on management and performance assessment, different application models were used in different companies.

The final aspect analyzed was the representativeness of the journals in the bibliographic profile and references. The highest publishing journals in terms of profile articles were the European Journal of Operational Research and Review of Accounting Studies, with approximately 50% of articles on transfer pricing and performance evaluation published in these journals. On analysis of the 95 references, the European Journal of Operational Research stood out once again with ten articles, followed by Review of Accounting Studies the Journal of Accounting and Economics, both with five articles. These journals are considered significant in the field because they exhibit a good impact factor and are among the best journals (Quartile 1) to publish in within their respective categories.

This study contributes to helping future researchers understand how to conduct a constructivist selection and analysis process of a bibliographic profile with theoretical recognition, which can also be applied when searching for studies on other topics. However, it is primarily an initial study for researchers who intend to address managerial aspects of transfer pricing aimed at performance assessment of companies' responsibility centers, since it gives them easy access to relevant studies that are less than 15 years old and helps them understand the journals that publish articles on the theme.

International research in this area involves the construction of models that aid in corporate decision-making and is an important field for future studies in Brazil. Future research aimed at compiling a bibliographic profile should also apply other methodologies, such as an integrative literature review, which "which allows the synthesis of multiple published studies and enables general conclusions to be drawn on a specific area of study" (MENDES; SILVEIRA; GALVÃO, 2008).

Limitations of this study include temporal analysis of the articles, searching for articles published from 2000 onwards, and the use of international databases, selecting article in English due to their recognition and scientific scope, as mentioned in some of the studies (ENSSLIN et al., 2012; ENSSLIN et al., 2015; LACERDA; ENSSLIN; ENSSLIN, 2012).

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Preços de transferência: uma análise bibliométrica da literatura internacional

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RESUMO

A descentralização da tomada de decisão com o intuito de tornar o controle dos processos mais rápido e eficiente tem se tornado algo comum nas empresas do mercado atual. Os centros de responsabilidade tendem a ter seu desempenho avaliado periodicamente, sendo a correta definição dos preços de transferência de produtos e serviços um dos fatores decisivos para uma avaliação desses centros. Desta forma, o objetivo do presente estudo é buscar e analisar as pesquisas, realizadas a partir de 2000, sobre o preço de transferência, visto como uma ferramenta para a avaliação do desempenho, a partir de um processo denominado ProKnow-C (Knowledge Development Process – Constructivist) que tem como objetivo construir conhecimento a partir dos interesses e delimitações de um pesquisador, segundo a visão construtivista. Como resultado identificou-se o portfólio bibliográfico constituído por 14 artigos. A partir de análise do portfólio bibliográfico identificou-se o reconhecimento científico dos artigos publicados, os autores que são referências e os periódicos que mais se destacam nas publicações sobre o tema pesquisado.

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