



## **BALANCED SCORECARD IN ORGANIZATIONS WITH DEVELOPMENT AND THE FUTURE: A BIBLIOMETRIC ANALYSIS AND CAUSAL INFERENCE FRAMEWORK**

*Balanced Scorecard em organizações com desenvolvimento e futuro: uma análise bibliométrica e quadro de inferência causal*

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### **ABSTRACT**

This study compiles and evaluates the balanced scorecard literature that has been published in mainstream academic journals since Kaplan and Norton introduced the balanced scorecard in 1992. In light of the influence of the balanced scorecard on accounting practices, a research framework is established in accordance with the system effectiveness model by Doll and Torkzadeh. The literature is categorized into upstream, application, and downstream literature on the basis of the abstract concept of the balanced scorecard, its concretization into the enterprise, and its impact on the enterprise. This classification can assist in identifying opportunities for future research and promoting it. Furthermore, the characteristics and benefits of domain-balanced scorecard research are examined in accordance with this framework. In parallel, the bibliometric method is employed to evaluate the application content and prospective research direction of the balanced scorecard via the VOSviewer model. Finally, the literature is summarized, and the future research trajectory of the balanced scorecard is projected from the perspective of the era context and the logical framework of the article.

**Keywords:** Balanced Scorecard, Bibliometric analysis, Causal inference.

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## BALANCED SCORECARD EM ORGANIZAÇÕES COM DESENVOLVIMENTO E FUTURO: UMA ESTRUTURA DE ANÁLISE BIBLIOMÉTRICA E INFERÊNCIA CAUSAL

*Balanced Scorecard in developing and future-bearing organizations: a literature analysis and causal inference framework*

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### RESUMO

Este estudo compila e avalia a literatura do balanced scorecard que foi publicada nas principais revistas acadêmicas desde que Kaplan e Norton introduziram o balanced scorecard em 1992. À luz da influência do balanced scorecard nas práticas contábeis, uma estrutura de pesquisa é estabelecida de acordo com o modelo de eficácia do sistema de Doll e Torkzadeh. A literatura é categorizada em literatura upstream, application e downstream com base no conceito abstrato de balanced scorecard, sua concretização na empresa e seu impacto na empresa. Essa classificação pode ajudar a identificar oportunidades para pesquisas futuras e promovê-las. Além disso, as características e benefícios da pesquisa de balanced scorecard de domínio são examinadas de acordo com essa estrutura. Paralelamente, o método bibliométrico é empregado para avaliar o conteúdo da aplicação e a direção da pesquisa prospectiva do balanced scorecard por meio do modelo VOSviewer. Por fim, a literatura é resumida e a trajetória futura de pesquisa do balanced scorecard é projetada a partir da perspectiva do contexto da época e do quadro lógico do artigo.

**Palavras-chave:** Balanced Scorecard, Análise bibliométrica, Inferência causal.

## INTRODUCTION

The balanced scorecard is playing an increasingly important role in global business management as a strategic management accounting tool that balances financial and nonfinancial metrics (Suárez-Gargallo & Zaragoza-Sáez, 2023). On the one hand, the international research organization 2GC conducted a study on the global use of the balanced scorecard from 2009-2020, in which the results of the 2020 survey revealed that the use of the balanced scorecard by executive-level executives was 88% of the organizations surveyed from 21 countries and that the balanced scorecard was reviewed and reported with significantly greater frequency (especially after the new crown outbreak) (Afrasiabi et al., 2022). The frequency of review and reporting on the Balanced Scorecard has increased significantly (particularly following the New Crown outbreak), and the majority of organizations surveyed reported that the Balanced Scorecard was 'very' (67%) and 'extremely' (25%) useful, demonstrating that the Balanced Scorecard has been effective in business practice (Lazarević et al., 2020). The survey also revealed that the increased frequency of balanced scorecard use is linked to a rising focus on long-term development, with more than half of organizations saying that they plan to include more sustainability-related metrics in their balanced scorecard (63%) (Afrasiabi et al., 2022). On the other hand, the results of the survey of Chinese organizations show that the balanced scorecard is still being used more frequently in China, with significant results, despite the costs associated with the complexity of its logic and the number of dimensions (Zhang, 2023).

With the rapid development of strategic performance management tools, the balanced scorecard is still routinely utilized around the world, mainly because of its significance for current accounting and business reforms (Davis & Albright, 2004). As Song and Shen (2015) state, accounting is facing a crisis of 'rapidly diminishing relevance'. Mao and Li (2023) claim that the research and analysis resulted in a solution to the financial accounting crisis, and the balanced scorecard, as a management accounting tool, can achieve the functions of performance evaluation and strategic management and can complete all-round strategic management on the basis of multidimensional performance measurement to increase the usefulness of the management accounting information to managers, which is highly valuable in solving the accounting crisis. In addition, due to the gradual transition from "maximizing shareholder value" to "maximizing stakeholder value," the contemporary business environment is increasingly emphasizing the enterprise's impact on its stakeholders and the relationship between the enterprise and society (Liu, 2021). The balanced scorecard, on the other hand, explicitly incorporates nonfinancial indicators into the evaluation metrics system and seeks to maximize stakeholder value. This meets the social value needs of the business (Frederico et al., 2020). Therefore, the balanced scorecard is able to meet the requirements of future accounting trends and changes in the business environment and has broader development prospects than before (Li et al., 2021).

Overall, this investigation makes a valuable contribution to enhancing our understanding of the development of the balanced scorecard. This study provides a clearer understanding of the conceptual construction of the balanced scorecard, including the development, current status and function of the concept. The application and current status of the balanced scorecard are analyzed through bibliometric tools. It is also summarized in conjunction with the causality framework to identify future research opportunities and promote future practice. Therefore. By reviewing balanced scorecard research field, the characteristics, strengths, and shortcomings of balanced scorecard research are elucidated.

This study enhances the existing corpus of literature by offering a comprehensive analysis of previous research and facilitating a more comprehensive comprehension of the current evolution of BSC in broader contexts. The objectives of this investigation are as follows:

- (1) What is the broad-sense concept of a balanced scorecard?
- (2) How does the balanced scorecard apply to corporations?
- (3) How does the balanced scorecard affect organizations?

The article is structured as follows: The theoretical background on the BSC that led to the research questions is presented in Section 2. The methodology for a systematic literature review and bibliometric review of BSC use is described in Section 3. The findings regarding the most significant emerging topics are then limitations and discussed in Sections 4 and 5.

## 1 LITERATURE REVIEW

In 1992, Kaplan and Norton published utilizing the balanced scorecard as a performance evaluation instrument to rectify the deficiencies of conventional one-dimensional financial indicator evaluations (Kaplan & Norton, 1996c). In the process of promotion, they gradually comprehended how performance tools can be employed by enterprises to facilitate strategy execution. Subsequently, they published numerous articles and continued to refine and enhance this collection of strategic management systems, resulting in the balanced scorecard's dual functionality as both performance evaluation and strategic management (Kaplan & Norton, 1996c). The specific development history is shown in Table 1.

**Table 1 - History of the balanced scorecard literature**

Development process	Time period	Development level
Initial: nascent period	1987-1989	Prior to Kaplan and Norton's work on the BSC, AnalogDevice (ADI) first experimented with the Balanced Scorecard in 1987 when ADI implemented a subprogramme called 'Quality Improvement' (QIP) in order to ensure that its strategic objectives were met (Kaplan & Norton, 1992). In 1987, ADI implemented a subprogramme called Quality Improvement, or QIP, to ensure that its strategic objectives were met, and while the QIP was underway, ADI continued to translate the primary factors contributing to achievement for achieving its strategic objectives into an annual business performance strategy, which resulted in the premiere balanced scorecard in the world: the inaugural 'balanced scorecard' from ADI'. This was the source of the world's first balanced scorecard: ADI's first 'Balanced Scorecard' (Kaplan & Norton, 1992).
Period of theoretical research	1990-1993	In the days that followed Professor Kaplan discovery of ADI's first balanced scorecard, he and Norton started the theoretical study of balanced scorecards (Kaplan & Norton, 1996b). With the continuous expansion and updating of the balanced scorecard, the theoretical research on it is also continuously enriched. In the theoretical research stage from 1990 to 1993, the balanced scorecard was successively extended from the 'company performance appraisal' to the 'enterprise strategic management'. In the theoretical research stage from 1990 to 1993, the BSC was extended from 'company performance appraisal' to 'enterprise strategic management', which is also the two milestones mentioned by scholars (Kaplan & Norton, 1993).
Period of extensive application	1994 onwards	The global business community began to widely accept and recognize the Balanced Scorecard after Kaplan and Norton extended it to the strategic management system of enterprises in 1993. It was initially implemented in numerous enterprises in the United States and has since been extended to enterprises, industries, and other entities in numerous countries worldwide (Kagioglou et al., 2001).

### 1.1 Broad-sense concept of the balanced scorecard

A balanced scorecard has been created and used primarily as a management tool. However, during practice and research, the balanced scorecard has also developed some derivative concepts. Mitchell et al., (1997) in accordance with the approach to defining stakeholder concepts, this paper categorizes the definition of the balanced scorecard according to the theoretical background of the different concepts. It is currently studied and used as a management tool, rhetorical machine, and institutional carrier in the fields of management, rhetoric, and sociology (Fadel et al., 2021).

This research encourages the concept of a rhetorical machine to investigate and comprehend the potential of visual inscriptions to contribute to the management of knowledge creation, diversity, and disagreement beyond representational purposes by investigating the agency of visual diagrams such as the BSC and unraveling the rationale for their use (Basuony, 2014). The BSC is initially a visual performable space, which is a schematic visualization that captivates users by providing a space in which they can perform a strategy composition task. In this space, users can conceive of a variety of meanings for abstract strategic imperatives, objectives, KPIs, and the potential connections between them (Hristov & Chirico, 2019). In this regard, the BSC functions as both a rhetorical wheel and a strategy map (Assiri et al., 2006), is an inscription (Amer et al., 2022; Abdurrachman et al., 2022) that

not only is the outcome of managerial action but, more importantly, establishes the framework for future engagement and action.

Moreover, a balanced scorecard is not the language of purely rational and objective scientific argumentation but rather a rhetorical machine (da Costa Ferreira, 2017), a written and mental visual image that aids in the construction and communication of knowledge, which mobilizes behavior and accesses a priori knowledge but is not designed to convey objective and unchanging representations, meanings and messages (Davis & Albright, 2004). The presence of a rhetorical machine facilitates the integration of existing knowledge and the production of new knowledge. Busco & Quattrone (2015) argue that the balanced scorecard as a rhetorical machine has the following four key characteristics: (1) constructing a space for organizations to sort out their strategic logic; (2) providing guidance in establishing new logical paths between abstract strategic concepts; (3) allowing organizations to continually question strategic concepts; and (4) facilitating the construction and maintenance of organizational beliefs.

Some studies have claimed that the balanced scorecard is an institutional carrier, a mapping of culture and ideology. Bourguignon et al., (2004), by comparing the degree of ideological alignment between American and French societies, suggest that the management tool is aligned with the local ideology, i.e., the management tool is a reflection of an ideology. They argued that the significance of local ideology should be acknowledged, particularly in the context of systems that are established and developed in ideologically distinct environments. Despite the potential for the impartiality of the measurements to be called into question, the fundamental ideological premise of the balanced scorecard is that individuals who exert themselves sufficiently will be fairly assessed and compensated (Fadel et al., 2021).

The balanced scorecard continues to develop and improve the formation of a complete strategic management system so that the balanced scorecard as the performance evaluation and strategic management of the dual function simultaneously. The following section describes these two functions.

## **1.2 Key functions of the balanced scorecard as a performance evaluation tool**

First, the management tool is the most important definition of the balanced scorecard and is what is discussed in this paper. The balanced scorecard, as a management tool, is a set of management systems centered on multidimensional performance evaluation, with the dual functions of performance evaluation and strategic management, and the performance evaluation function serves the strategic management function (Kaplan & Norton, 1996a).

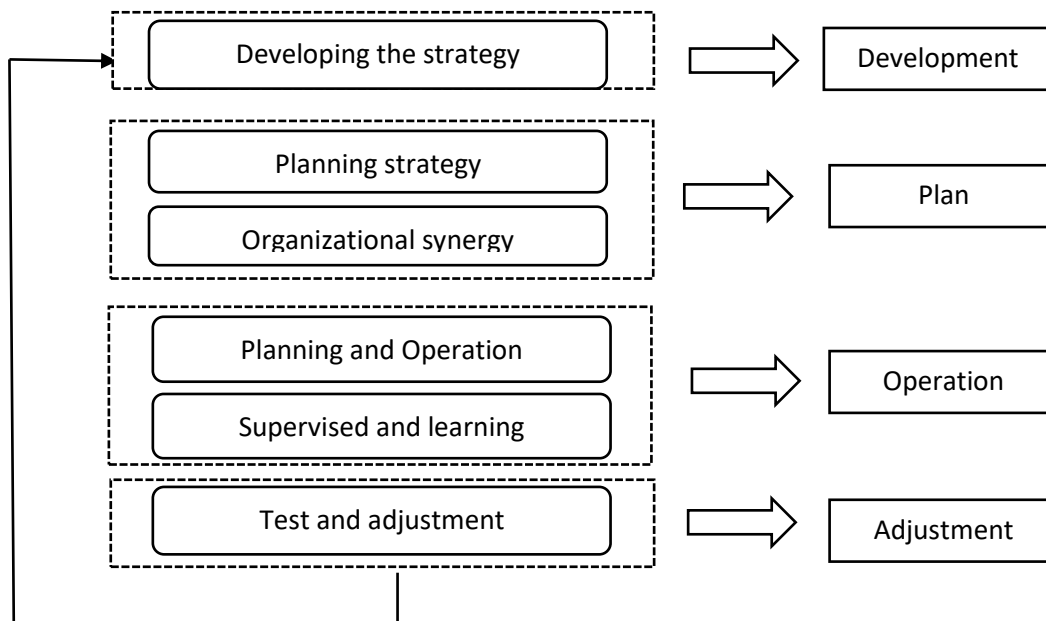
The BSC performance evaluation function Kaplan and Norton designed the it as a set of metrics to give senior a concise and comprehensive overview of the business for the management (Yılmaz & Nuri İne, 2018), based on the findings of a study of 12 companies that were leaders in performance evaluation. The balanced scorecard, as an evaluation system, emphasizes ‘balance’ and is designed to address the problems associated with a single financial performance metric by providing managers with a broader set of metrics to drive long-term value creation, ultimately laying the foundation for four causal perspectives: financials, customers, internal business processes, and learning and growth (Tawse & Tabesh, 2023). The four measurement perspectives here are not a simple collection of KPIs but four types of measurement indicators and their corresponding target values integrated by the organization after the value gap is decomposed and the cause–effect relationships are clarified on the basis of the strategic themes of the strategy map and the identification of strategic objectives (Suárez-Gargallo & Zaragoza-Sáez, 2023). As an evaluation system for assessing whether strategic objectives have been achieved, the formulation and implementation of the balanced scorecard have become important bridges between a company's strategy formulation and actual operation (Perramon et al., 2016).

Therefore, this study summarizes both the management tool function and the strategic management function of the balanced scorecard.

### 1.3 Strategic management functions of the balanced scorecard

The existing balanced scorecard theoretical system has formed a closed strategic management system with the balanced scorecard as the core and an emphasis on strategy (Quesado et al., 2022), which not only has the function of performance evaluation but also has the related function of strategic management (Kaplan & Norton, 2001). The complete system consists of six main phases: strategy formulation, strategy planning, organizational collaboration, operational planning, monitoring and learning, and testing and adjustment (Inamdar et al., 2000). These phases fulfil four functions, namely, strategy formulation, strategic planning, strategy implementation, and strategy adjustment, as shown in Figure 1.

**Figure 1 - Balanced Scorecard Strategic Management Functional Implementation Structure**



Strategy development involves a company's mission, values and vision and relies heavily on strategy development tools such as Porter's five forces model and SWOT analysis (Rafiq et al., 2020). Strategic planning consists of two main phases, namely, strategic planning and organizational synergy (Rafiq et al., 2020). The planning strategy relies on the development of a strategy map and a balanced scorecard to make the strategy implementable by translating it into metrics, target values and action programmers (Suárez-Gargallo & Zaragoza-Sáez, 2023). Organizational synergies are focused on top-down management, with the company's balanced scorecard and the strategy office coordinating the development of the balanced scorecard across the business units at the top and strategic communication and incentivization of the balanced scorecard metrics for employees at the bottom. The balanced scorecard is a strategic control system that can be employed to (i) clarify and achieve consensus regarding strategy, (ii) align departmental and personal objectives with strategy, (iii) link strategic objectives to long-term targets and annual budgets, (iv) identify and align strategic initiatives, and (v) secure feedback to enhance and learn about strategy (Kaplan & Norton, 1996c).

Overall, Strategic planning determines the overarching design of the balanced scorecard's performance measures, while the strategy-setting function serves as the foundation for performance measurement, Strategy implementation is contingent upon the balanced scorecard's specific performance measures, while strategy alignment is contingent upon the results obtained from the balanced scorecard's performance measures, which in turn influence strategy setting (Balaji et al., 2018). Strategy development is the beginning and conclusion of the strategic management function of the balanced scorecard. The performance evaluation function is the core of the balanced scorecard, and the combination of the two results in a comprehensive balanced scorecard function system. (Al-Najjar & Kalaf, 2012). Notably, although this closed strategic, the balanced scorecard has been implemented

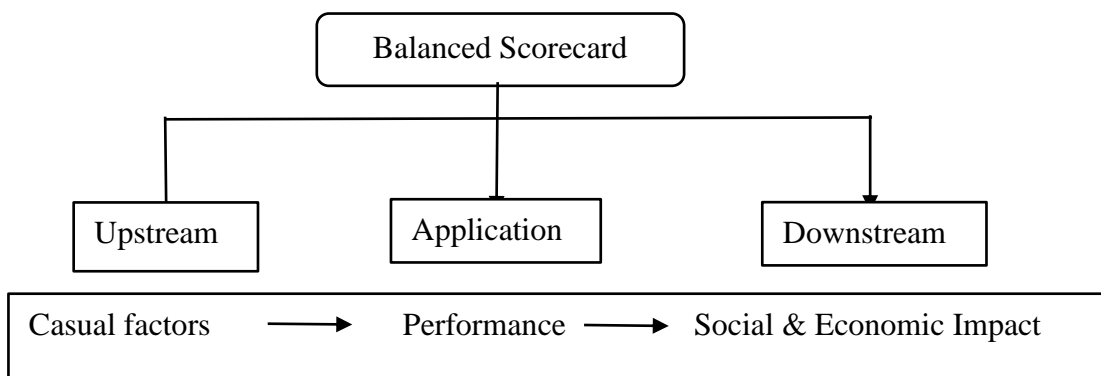
in its entirety by not all organizations, its core function remains performance evaluation. The strategic management function is frequently contingent upon the level of implementation by the company (Gao & Gurd, 2015).

For this reason, on the occasion of the 30th anniversary of the birth of the balanced scorecard, this paper focuses on the research results of the balanced scorecard in top international journals over the past 30 years and provides an overview of the existing research (Fatima & Elbanna, 2020). The balanced scorecard, as an accounting research product with strong practicality<sup>3</sup>, has an important impact on accounting practices. Considering that the balanced scorecard is closely related to practice, this paper is based on the idea of practicality and follows the logic of how this accounting concept was formed, how it was materialized into the enterprise, and how it plays an effective role in the enterprise, which will help to identify opportunities for future research and promote the improvement of future practices in summary (Rabe & Ali, 2019).

This paper draws on Doll and Torkzadeh's (1991) model of information system application effects to construct a research framework (as shown in Fig. 1) to overview the conceptual construction, application and economic consequences of the balanced scorecard. Moreover, this paper separately collates the research results of the balanced scorecard over the past 30 years and analyses the research characteristics, strengths and shortcomings of the balanced scorecard, with the goal of providing researchers with more comprehensive references and lessons.

As noted above, we summarize the above of the balanced scorecard. This paper provides an overview of the conceptual construction and application of the balanced scorecard, drawing on the Doll & Torkzadeh (1991) information systems modelling framework for research on causal effects (shown in Figure 2).

Figure 2 - Causal inference framework (Source: Adapt from Doll & Torkzadeh, 1991)



#### 1.4 Promotion of the balanced scorecard

With respect to how accounting techniques have developed, proliferated and diffused into global management practice, existing research tends to fall into two categories of opinion (Niven, 2014). On the one hand, it is argued that the diffusion of these techniques is related to the quality of their practice and their functional effectiveness. On the other hand, the popularity of these concepts is thought to be related to irrational claims such as following management trends and imitating (Suárez-Gargallo & Zaragoza-Sáez, 2023). In the case of the balanced scorecard, the degree of dissemination is of course influenced by the usefulness of its performance evaluation function and its strategic management function (Gumbus & Lussier, 2006). However, on the basis of the broad conceptual scope of the balanced scorecard, some scholars have argued that the spread of the balanced scorecard is not solely dependent on its usefulness but also because it is a ‘management fashion’ in its own right. Cooper et al., (2017) analyses the process by which the balanced scorecard was popularized and transformed into managerial thinking, arguing that the ‘successes of the balanced scorecard is not entirely dependent on whether it actually achieves results in terms of improved business performance. This ‘management fashion’ is determined by the persuasive power and influence of the balanced scorecard. In terms of persuasiveness. Nørreklit (2003) argues that the rhetoric in the language used in the dissemination of the balanced scorecard plays an important role in making the scorecard appear ‘persuasive’, even though it may not be ‘convincing’. This makes the balanced scorecard appear ‘persuasive’ even though it may not be ‘convincing’. In terms of its impact, the BSC as a

management accounting innovation has been legitimized by the community, promoted by consultants, and considered to have wide applicability. Moreover, some companies applying the balanced scorecard have argued that its introduction facilitates access to resources, such as increased funding, status, and recognition.

## 2 METHODOLOGY

To understand the application and development of the balanced scorecard globally. In addition to the comprehensive literature review method, a bibliometric approach was utilized for the study. Thus, A systematic literature review and bibliometric method are employed in this study to investigate the extent of the current academic debate concerning the use of BSC. The study is founded on a specific and rigorous sequence of stages, and systematic reviews implement a replicable, scientific, and transparent process, in contrast to traditional narrative reviews (Tranfield et al., 2003). A systematic literature review is an organized, transparent and replicable research methodology for analysing the extant literature (Álvarez Jaramillo et al., 2019).

Bibliometric methods have been extensively employed to generate detailed maps of the knowledge structure within a specific stream of literature. The "visualization of similarities" is the specific focus of the bibliometric analysis technique (Eck & Waltman, 2009). The 'Web of Science Core Collection' database was chosen as our source for this research because it is broadly acknowledged as the optimal choice for social science issues, particularly bibliometric studies.

The Web of Science dataset was utilized for this study. At a time when the sample was presumably ready for analysis, some anomalies were discovered: the data displayed were riddled with errors and blunders in terms of correct and unique identification of authors, articles, reviews, keywords, and citations, completely contaminating the sample and thus hampering the possibilities for a minimally accurate analysis. All these anomalies must be corrected to unify the data and be ready to carry out the study on an accurate sample (García-Lillo et al., 2016; Suárez-Gargallo & Zaragoza-Sáez, 2023). Furthermore, duplicates were removed to ensure the clarity of the data. Once the sample was cleaned and analysed, two software applications were needed to conduct the research: VOSviewer and Scimago Graphic.

## 3 RESULTS

VOSviewer and Scimago Graphic keyword covariance mapping can effectively display the hot words in a certain subject area within a certain period of time, and the aggregation of these hot words can provide a high degree of summary of the hot topics of the current literature in the subject area. Therefore, the transformation of 345 core journals in the field of balanced scorecard research from 2000-November 2024 into VOSviewer and Scimago Graphic software for visual analysis will play an important role in exploring the research hotspots in this field.

### 3.1 Keyword analysis

Keyword clustering is a visual analysis of the existing results in this research field, which is helpful for researchers to efficiently sort out the research lineage as well as research hotspots in this field. The keyword clustering function of VOSviewer software was used to generate the clustering diagram, and the results are shown in Figure 3. The overall picture of the keyword clusters generated by the VOSviewer software is as follows: 30 items (5 clusters) in the evolution of the balanced scorecard development from 2002 to November 2024. As shown in Figure 3, the top 10 clustering labels of the research in the field of balanced scorecards from 2002-2024 are performance evaluation, performance evaluation, strategy map, performance management, performance assessment, indicator system, system construction, evaluation system corporate strategy, and performance, which are hot areas in the research of balanced scorecards.

As some of the clusters in the clustering have similar meanings, the above clusters are merged and divided into the following three main categories and analysed with detailed information under each cluster as follows:

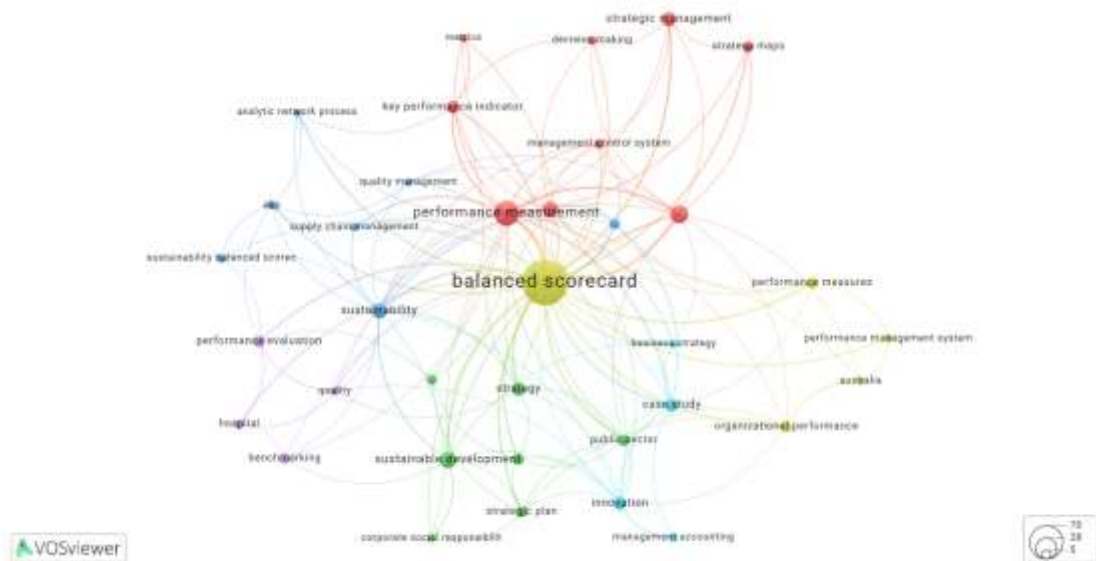


The first category is performance evaluation. The main clusters are performance evaluation, performance management, performance assessment, and performance. These clusters are all related to performance evaluation; at the same time, owing to the large number of studies under this category, the literature under the ‘theme = performance evaluation and keywords = balanced scorecard’ again for secondary cluster analysis has the following findings. First, in applied research, the industries in which BSC is applied to performance evaluation and management are concentrated mainly in the public sector, commercial banks, hospitals, and so on. Second, research tends not to use BSC alone but rather in combination with other management accounting methods to achieve a complementary and mutually reinforcing effect. For example, the key performance indicator (KPI) method and other performance management methods are combined to build a performance management system. Third, from the overall perspective, the BSC has been applied in the performance management literature, mainly in the target evaluation system, with a detailed indicator system for how to build a more reasonable discussion.

The second category is strategic management. The main clusters include strategy maps and corporate strategy. The balanced scorecard proposed by Kaplan and Norton in the 1990s essentially solved the problem of strategy measurement, which used to be more difficult in the field of corporate strategic management. However, the inability of enterprises to comprehensively describe their strategies, the inability of all levels to reach a consensus on strategy, and poor communication between managers and employees have led to problems related to how to clarify and position the strategy and how to visualize the strategic objectives. BSC as a performance management tool involves performance evaluation and strategic management-related theories and methods, and at the same time, the establishment of the BSC indicator system within the indicators also has a mutually influential, interlocking effect, not only on the realization of the strategy to play a managerial function but also on performance evaluation. Therefore, the strategy map provides a more user-friendly, intuitive, detailed and efficient way to refine and apply the balanced scorecard theory. The balanced scorecard system now has a complete strategy implementation system. Many enterprises use strategy maps to describe the strategy, use the balanced scorecard to measure the strategy, and use strategy-centered organization to manage the implementation of the strategy; the sum of the three parts is the whole process of effective implementation.

The third category consists of building evaluation systems. In addition to using the traditional balanced scorecard system for performance evaluation, scholars have also embedded new dimensions based on the traditional balanced scorecard that are in line with the actual situation of the enterprise or industry to form an optimized and more relevant BSC framework.

Figure 3 - Keyword co-occurrence network



VOSviewer and Scimago Graphic are used to introduce the original literature and node type selection of keywords after running to obtain the keyword collinear mapping (see Fig. 4). According to the statistics, performance evaluation suggests that the performance evaluation and management literature plays an important mediating role in the knowledge network of balanced scorecard research.

According to the keyword frequency and center degree of the top ten ranking table, combined with the analysis of related research literature, we find that the hot spots of the balanced scorecard research are concentrated mainly in the following aspects: Firstly, as a tool for performance evaluation of specific objects for assessment and evaluation or management. Secondly, to explore how to better use the BSC tool for the construction of the indicator system, which also includes exploring how to use the BSC and KPI and other methods of more reasonable combination, innovative construction of a performance indicator system. Thirdly, this research combines with other management accounting methods and then embed in the general framework of management accounting, mainly with strategic management, budget management, and cost control, coupled with strategic management, budget management, and cost control. It also includes exploring how to combine BSC and KPI methods more reasonably and constructing performance indicator systems innovatively. Fourth, the high-frequency words used in the industry are concentrated mainly in commercial banks, public hospitals, and colleges and universities.

Figure 4 - Keyword Cloud Map



### 3.2 Country productivity analysis

Figure 5 shows the publication countries. According to the statistics, the authors of 345 publications were from 29 countries and regions. Figure 5 illustrates the 29 countries and regions in terms of the abundance of research publications. The 29 countries and territories are categorized into five clusters. When it comes to research publications, most countries around the globe are covered by related articles. Among these, the United States (67) ranks first, followed by the United Arab Emirates (66) and the United Kingdom (63).

Figure 5 - Publication Countries



#### 4 RESEARCH LIMITATIONS

The balanced scorecard is a scientifically valid performance management tool. It can help enterprises evaluate their own business performance from various aspects and at various levels and can truly and comprehensively reflect their performance. However, the specific intensity of the use of the balanced scorecard and its acceptance by internal staff has not been analysed and discussed in terms of system application. During the course of the study, the literature on the balanced scorecard was less researched in the downstream literature, which could be strengthened. The balanced scorecard also has limitations in the areas of stakeholder management and product chain management. When applied across the organization, the balanced scorecard can help align organizational strategic policy objectives with business unit strategic priorities and business objectives, and by aggregating information, the different business units can work together to create value for customers and the organization as a whole. Moreover, the balanced scorecard is able to transform service departments such as human resources, information systems and finance departments from cost centres to strategic partners of the enterprise, which helps integrate the overall planning and strategic alignment of the enterprise. However, the impact of the balanced scorecard on the control of business units is weak and that business units continue to operate with a focus on financial performance. Thus, the balanced scorecard has limitations in stakeholder management and product chain management.

#### CONCLUSION

This paper surveys 30 years of research and discussion of the balanced scorecard in the international and national literature and draws the following main conclusions. First, existing concepts of the balanced scorecard have been fully explored in existing studies, starting from the initial concept of the balanced scorecard and summarizing two functions of the balanced scorecard as a management tool. This study expands the broad conceptualization of the balanced scorecard as a rhetorical machine and institutional vehicle and illustrates how the balanced scorecard, as a complex concept, has been promoted and disseminated globally. Second, there is a complementary relationship between the international and national literature on the use of the balanced scorecard. The international literature tends to discuss the decision and purpose of use, the extent of use, the internal push, and the influencing factors of firms, with more discussion at the generalized and theoretical levels. Finally, the literature has a different focus when discussing the two functions of the management tool.

On the one hand, the BSC was originally designed as a performance appraisal system consisting of four different dimensions and multiple types of indicators, so its performance evaluation function is more direct and specific. Most of the existing research focuses on the ability of the balanced scorecard to provide effective incentives to improve the future performance of a firm, such as promoting employee performance, rationalizing executive arrangements, and improving the business and financial performance of the firm. On the other hand, the strategic management function of the balanced scorecard is based on the performance evaluation function, so most of the research in this area focuses on the impact on the organisational level of the enterprise rather than specific impacts, such as the comprehensibility of the strategy, continuous optimization of the strategy, improvement of the strategic consistency, effective setup, effective communication, and effective implementation of the enterprise's strategy. On the basis of the above conclusions and on the research framework of this paper, combined with the background of the current era of digitalization, diversification and complexity, as well as relevant research directions, this paper presents the following outlook on the future research of balanced scorecards.

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