A Bibliometric Analysis of Culture Dimensions with Visualisation Approach

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ABSTRACT

The academic interest in cross cultural management has grown in recent years significantly, especially for culture dimension theory as the representative theory. However, bibliometric and visualisation researches on this subject are still insufficient. The purpose of this research is to perform a review of the publication metrics on culture dimensions and to propose a research agenda for future research. In this study, the data was extracted from the Scopus database. To offer an overview of the related literature, various bibliometric techniques such as bibliographic coupling and co-occurrence analysis were combined with assorted themes to analysis. Since there is still no study that analyses the bibliographic data on culture dimension in cross-cultural management field, this study is a one-of-a-kind contribution to the body of knowledge. This study also gives a visual and schematic framework for the investigation of this issue, as well as an overview of trajectories. This study may assist researchers in identifying current trends and future research directions, as well as guiding future authors in conducting more effective studies.

Keywords: Cross-cultural management, Culture dimension, Bibliometric, Publication Metrics.

1. INTRODUCTION

With the rapid development of communication technologies and global economy, the distance between countries in the world has been greatly shortened, and the economic and cultural exchanges between countries are more frequent. In this context, the cross-cultural issues caused by people's different cognition and awareness of different cultural backgrounds are becoming an important issue in economics and management field. Especially in international business, cross-cultural management has become an important practical issue for enterprises, and it is also an important theoretical issue for scholars [1].

Despite all criticism[2]–[4], the culture theory provided by the Geert Hofstede has been the most recognized and cited study to analysis cross cultural issues.

While scholars have given culture dimension theory a huge amount of attention, the literature that has resulted is still fragmented. Scholars have a tradition of taking stock of what has been done in the past and reflecting on the future, much as they do in the sciences and other disciplines of social sciences[5]. As a result, for a better understanding of culture dimension study, it is vital to track and map previous research.

From a research standpoint, it is critical to identify and present the publishing trends in a certain topic and this will allow researchers to get a better understanding of the research trajectory in the chosen field. Thus in order to successfully conduct cross-cultural research in the business and management discipline, this study will conduct a bibliometric analysis to close the gap.

It is convenient to discover the trends in literature by employing the bibliometric research method utilizing big data. The development patterns of the topic may be discovered intuitively and graphically by examining the network relationships of authors [6] , nations[7], journals[8] , and keyword analysis[9].

The study makes a three-fold contribution. Firstly, the result reveals the research's tendencies. Secondly, the study presents an overview of culture dimension research's intellectual structure through the bibliographic coupling analysis. Finally, and perhaps most crucially, this research proposes several suggestions for future research, which might assist researchers in better understanding and identifying further research subjects.

2. METHOD

2.1. Bibliometric Analysis

A bibliometric analysis is a scientometrics approach that creates relevant information by assessing bibliographic material objectively and quantitatively [10] and can be effective in organizing information within a certain research subject[11]. In addition, the use of keywords for Bibliometric can analyse the main research topics in a field, as well as their micro-level relationships[12].

2.2. Data Selection

This study searched the word "culture dimensions" in the title, abstract, keywords, and text of the article from SCOPUS. The original number of publication revealed that 5501 documents were released between 1981 to 2021. Since this is the area of interest for the analysis, the discipline category is confined to "business, management, and accounting," because of the research purpose, and the literature type is filtered by "Article," and the result shows 1318. To mitigate the effect of the chronological component on statistical results, the year 2021 was deleted. Ultimately, 1290 documents were chosen.

The Boolean operators were used in retrieval process, and it is showed as follow: title-abs-key ("cultural dimensions") and (limit-to (subjarea, "busi")) and (limit-to (doctype,"ar")) and (exclude (pubyear, 2021)).

3. RESULT

3.1. Publication Trend

Figure 1 displays the publication trends in Culture Dimension research. The result reported here demonstrates that the publishing of the topic with culture dimensions is generally trending upward. This rising tendency may be a signal that the culture issues have been gaining more recognition in management research in recent years.
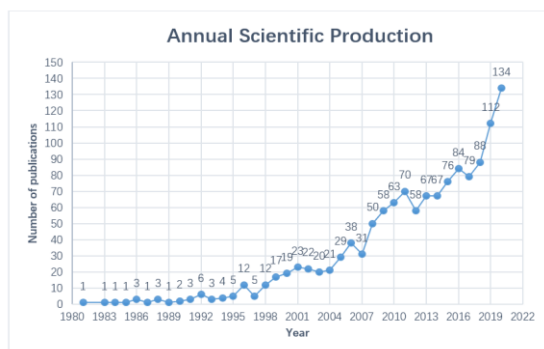

Figure 1 Publication trends

3.2. Leading Countries in Culture Dimension Research

It is critical to conduct an objective assessment of a country's scientific effectiveness. Over the decades, over 123 nations and regions have made contributions to culture dimension literature.

Table 1. The most productive countries

Rank	Country	Documents	Citations	AC/D
1	United States	466	20471	43.93
2	United Kingdom	134	3358	25.06
3	Australia	96	2905	30.26
4	Germany	73	1903	26.07
5	Canada	59	2441	41.37
6	China	52	1217	23.40
7	India	48	1261	26.27
8	Spain	47	947	20.15
9	Netherlands	46	2003	43.54
10	France	45	658	14.62
11	Hong Kong	36	2112	58.67
12	South Korea	33	1547	46.88
13	Italy	28	1184	42.29
14	Israel	27	1172	43.41
15	Brazil	25	568	22.72
16	Malaysia	25	269	10.76
17	Taiwan	25	1241	49.64
18	Turkey	25	852	34.08
19	Finland	22	249	11.32
20	Singapore	22	553	25.14

AC/D: average citations per documents

The table 1 shows that the United States is the most productive country with 466 publications. It indicates the United States academics are facing more cross-culture issues. With 134 publications, the United Kingdom ranks second, followed by Australia with 96 articles. With an average of 58.67 citations, Hong Kong (China) is the most influential region on the list. Taiwan (China) ranks second in terms of influence with 49.64 citations per article, while South Korea ranks third with 46.88 citations.

3.3. Bibliographic Coupling Analysis

Bibliographic coupling is a metric of similarity between research sources which can be used to compare different research subjects[13]. Bibliographic coupling appears when two documents commonly make reference to a third research. When two documents from separate nations cite the third document from another country in their publications, this is referred to as bibliometric coupling of countries. This analysis could demonstrate how other nations utilize comparable

material and concentrate their efforts on similar topic in their publications. The results provided in Figure 2 show that only 42 countries/regions out of a total of 123 countries/regions met the limits for the setting of each country/region minimum of 10 documents.
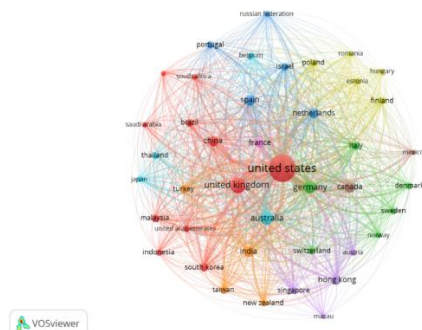

Figure 2 Bibliographic coupling of countries/regions

In the bibliographic coupling of countries, each node represents a country, and each colour represents a cluster. There are totally nine clusters in the result. The research of countries in each cluster is more relevant in the research topic. It can be seen that countries in the same colour may mainly focus on or face the same problems. And according to the clusters, it can be inferred that the cultural problems faced by different countries are not the consistent with great differences.

3.4. Keywords analysis

To determine future study paths for cultural dimension research in the area of management research, this study examined the co-occurrence of keywords and topical trends within themes.

3.4.1 Keyword Co-occurrence

It is possible to get a quantitative snapshot of a field by looking at the co-occurrence of keywords. The existing research community can use this to find subjects and fields in the literature that have not yet been identified and for which additional research is required.

Figure 3 depicts the results of this study's construction of a keyword co-occurrence graph in VOSviewer. To analyse all 3222 keywords, we set a criterion of at least 12 occurrences of a keyword, and only 38 keywords match this requirement. The examination of keyword co-occurrences in a scientific subject produces a network of topics and their relationships amongst them.
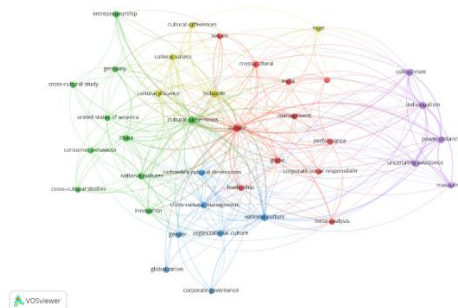

Figure 3 Co-occurrence of authors' keywords

In the map, the number of times the keyword appears is represented by the size of the node. According to the graph, the intensity of co-occurrence between two keywords may be determined by observing at the distance between nodes and the thickness of a line connecting them. In this diagram, the colour of the nodes shows keyword clusters, which are groups of phrases that commonly occur together and can be interpreted as broad research subjects in the field. From 1981 through 2020, there appear to be five basic themes that encapsulate the various thematic areas of attention in the field of research in culture dimensions.

In the first place, it seems that there is a widespread interest in business management in multinational company contexts, as shown by the frequent co-occurrence of keywords as Corporate social responsibility, culture, cross-culture, globe, Hofstede's cultural dimension, leadership, management, mate-analysis, performance, value (red cluster). Another of the topics covered in the second section is cross-cultural management in a particular context, including keywords China, consumer behaviour, cross-cultural studies, cross-cultural study, cultural dimensions, entrepreneurship, Germany, innovation, national cultures, united states of American (green cluster). Third, research on culture dimensions has also looked at the role of culture context in corporate management, as indicated by keywords such as Corporate governance, cross-cultural management, gender, globalization, Hofstede's cultural dimensions, national culture, organizational culture (blue cluster). The next cluster coloured yellow includes keywords as cultural differences, cultural distance, cultural values, Hofstede, trust (yellow cluster). Finally, the purple cluster is concerned with specific dimensions of the culture dimension theory, with keywords such as collectivism, collectivism, individualism, masculinity, power distance, and uncertainty avoidance.

3.4.2. Dynamic Topic Model

Biblioshiny is also utilized in this study in analysing the trend of keywords. The setting of minimum frequency of keywords for authors is 4 and the maximum number of keywords each year is set at 10 in

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this study. Figure 4 depicts the outcomes of the study. The year is represented by the abscissa, while the frequency is represented by the ordinate.
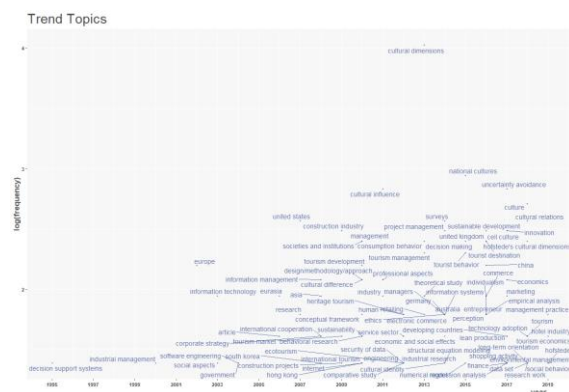

Figure 4 Trends of topic

According to the chart, the cultural dimension has been the most concentrated topic in this field over the previous ten years, namely from 2007 to 2019. The most extensively researched areas include cultural dimensions, national cultures, cultural influence, uncertainty avoidance, and etc. Certain phrases, such as social behaviour, tourism economics, environmental management, etc., are recent yet have a low frequency of occurrence, signaling that the problems they reflect have attracted some attention but not been fully explored.

4. CONCLUSIONS AND DISCUSSION

Bibliometric is used to determine the key trends and trajectories of research in a certain field or in a particular publication. Thus, this study identified the publication trend of culture dimension theory research from 1981-2020 to characterize and provide valuable information to assist all the cross-cultural researcher and stakeholders. The SCOPUS database was used to gather the data. The track record proves that the discipline has made tremendous advances over the last three decades.

Besides, analysis of the literature enables us to make a note of some promising future research directions. Keyword co-occurrence and keyword trend analysis revealed that the main subjects on culture dimension research are limited to several main areas. These subjects could be clues for future research. We propose the following potential paths for future research based on the aforementioned analysis, as well as keyword co-occurrence and keyword trend studies, and combined with systematic literature reviews.

4.1. Cultural Dimension Theory in Management Practice of Multinational Enterprises

Cross-border enterprises should be paid attention to different cross-cultural problems such as employees habits, Social customs and Institutional environment in management practice[14]. Employees from different cultures usually have different cognition and understanding, and can easily lead to misunderstanding and form cultural conflicts. The theory of cultural dimension is an important theory to analyse and understand cross-cultural issues, and can solve some practical problems. Therefore, the future research direction is how to solve the problems in the practice of transnational enterprise management.

4.2. Cultural Dimension Theory in Commercial Practice

In commercial practice, companies also face cross-cultural issues when making market decisions, especially those involving international market industries, sometimes tourism[15], advertising[16], etc. In these specific business practices, analysing the cognition and behaviour of the market and target objects is an important application of the cultural dimension theory. With the continuous expansion of international business and the changes of new trade forms and markets, the application of cultural dimension theory in business practice is likely to be a new research direction.

4.3. National Cultural Differences and Organizational Cultural Differences

The theory of cultural dimension originally comes from national cultural differences. In the context of national cultural differences, organizations also have different cultures[17]. The difference of organizational culture determines the how enterprise behaving and decision making[18]. For multinational enterprises, studying the influence of national cultural differences on corporate cultural differences can make enterprises make better judgments in decision-making. At present, this field has not been fully studied[19]. Therefore, this is also a possible research direction in the future.

4.4. Cross-cultural Management in Specific Country Contexts

The specific context of different countries is inconsistent, so cross-cultural management in different countries should obviously be a possible research direction. It can also be seen from the keyword analysis that a large number of studies have focused on the study of specific national cultural issues. At the same time, the specific situation of different countries also changes

with the changes of the times and economic development, so it needs to spend energy to study the real-time cross-cultural management in the national context.

4.5. The Composition of Cultural Dimension and Influence Mechanism

The composition of the cultural dimension has been continuously revised after being criticized since Hofstede proposed this theory. The content of its dimensions is constantly being improved, from the initial 4 dimensions to 6 dimensions. The impact of each of these dimensions as an independent concept on the enterprise is also an important object to be studied[20].

5. LIMITATIONS AND FUTURE WORK

It is necessary to recognise the existence of limitations in this study. Firstly, and foremost, the data for this study was gathered solely from the Scopus database. Researchers should obtain bibliographic information from additional databases such as the Web of Sciences in future investigations. Second, when it comes to the results, duplicate keywords, as well as words that utilize hyphens, might potentially interfere with the authenticity of the results.

Moreover, the use of alternative retrieval strategies by future studies is advised. Including more related search terms, is the attempts that can be made in the future research. Additionally, future studies may build networks of bibliographical coupling and keyword co-occurrence with looser threshold settings in order to uncover additional possible connections between already-identified sub-themes. Thus, the subject of study might be enriched by investigating possible subtopics related to the field, as well as alternative organization options from the literature.

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