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### Contingency Theory in Management Accounting: A Systematic Literature Review

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#### Abstract

Contingency theory suggests that group task performance depends on the interaction between leadership style and the favorable (or unfavorable) level of the situation. Therefore, contingency theory is one of many background theories in the study of applying management accounting in businesses. This article aims to evaluate research trends on contingency theory in management accounting based on documents in the Google Scholar database in the years 2010–2023. The results show a growing interest in research on the evaluation

of contingency theory in management accounting. From 2010 to 2023, there were a total of 475 articles on contingency theory in corporate management accounting indexed in Google Scholar. Of which, 2020 and 2021 are the years with the highest number of articles published with 53 articles per year. Finally, keyword analysis identified much content that will be important research points for future research.

**Keywords:** Contingency Theory, Management Accounting, Systematic Literature Review, VOSviewer

#### 1. Introduction

Traditional management accounting has been fully known since the 1950s. during this period, the market was competitive and the need for information to make operational decisions of administrators increased, therefore management accounting plays an important role in business operations of enterprises. Contingency theory helps the author form ideas about the impact of factors such as: Business strategy, competitive environment, legal regulations, accounting staff qualifications, information technology applications, information needs and methods of implementing modern techniques in the process of consulting for managers in the process of planning, implementing and evaluating business strategies. There have been many studies in many different countries on contingency theory in management accounting. Therefore, in this study, it helps readers grasp the development and information quality of the research "contingency theory in management accounting" through the frequency of using keywords and the number of citations and the number of times the author and co-authors are cited over time. At the same time, it helps future researchers know the trends of this topic over time.

The article clarifies the following research questions, including Q1: What is the number of articles on contingency theory in management accounting published from 2010 to 2023? Q2: What topics are the keywords used grouped into? And have these keywords changed and gained strength over time?

To answer the above questions, the study reviewed 475 articles published in the period 2010-2023. Research conducted through bibliometric analysis makes a great contribution to the research community because through bibliometrics, a valuable amount of information can be collected about a topic. By reflecting on what has been done and what needs to be researched in the future, the article aims to add to the literature on different methods and contexts to assist researchers on contingency theory in accounting. Management in business. The research is divided into parts: Defining the conceptual foundation, applied methods, research results and concluding remarks.

#### 2. Theoretical basis

Contingency theory is an important approach to organizational research and the role of management accounting in organizations (Chenhall, 2007) <sup>[3]</sup>. Contingency theory has become a popular theoretical model in empirical management accounting research (Cadez and Guilding, 2008) <sup>[4]</sup> despite inconsistent criticism across studies (Chenhall, 2007; Abdel-Kader and Luther, 2008) <sup>[3, 1]</sup>. The definitions of random variables and models used in this study are (Otley, 1980 <sup>[8]</sup>; Fisher 1995;

Langfield-Smith, 1997; Gredin and Greve, 2004). Contingency theory is based on an open systems approach in organizational and subsystem studies by considering correlations in the broader environment (Emmanuel *et al.*, 1990). Contingency theory states that "Organizational effectiveness needs to consider additional environmental factors that depend on subsystems (information systems, technology, management accounting, organizational structure)". The management accounting system is one of the organizational subsystems (Burrell and Morgan, 1979). From a contingency perspective, management accounting changes are divided into two categories according to the level of analysis. At the first level of analysis, a random factor is correlated with management accounting change. The different impacts of internal and external factors lead to changes in the production system and competition creates pressure for management accountants to change. Manufacturing companies continuously improve quality and minimize waste through techniques such as total quality management (TQM) and modern production systems (JIT). The application of modern techniques in a company's production system affects management accounting for change. MAS changes such as providing non-financial information, communication capabilities and policies to reward groups and individuals with achievements or initiatives (Ittner and Larcker, 1995) <sup>[5]</sup>. Management accounting techniques help improve capital costs, optimize input factors for production, support timely and accurate decision making, and improve production and business efficiency. According to research by (Mia and Clarke, 1999) <sup>[7]</sup> examined the relationship between the level of competition and business performance using the management accounting management model of 61 businesses. The study concludes that the level of competition is a determining factor in the use of information in business activities within an enterprise. In the second level of analysis, the random factor is correlated with management accounting changes. Some studies have approached cross-sectional research methods to examine random factors affecting management accounting changes (Libby and Waterhouse, 1996; Williams and Seaman, 2001). Research by (Libby and Waterhouse, 1996) examines how organizational theory influences management accounting change at the organizational level. Research results indicate four economic and organizational factors that impact management accounting change, including competitive intensity, level of decentralization, scale and organizational capacity. Williams and Seaman (2001) extended Libby and Waterhouse's (1996) study using a sample of 121 manufacturing firms from different economic sectors in Singapore and Hofstede's (1990) cultural framework. Williams and Seaman (2001) used all the variables, measures, PPNC, and statistical analyzes applied by Libby and Waterhouse (1996). The results indicate that the change variable alone is the best predictor of management accounting change in the period from January 1995 to the end of June 1997. Other variables showed general effects and were not consistent with the research hypothesis. Williams and Seaman (2001) concluded that management accounting change factors are influenced by cross-cultural differences and that the forecasting model cannot be generalized to all different economic sectors. Haldma and Laats (2002) examine management accounting changes in manufacturing companies in Estonia over the

period 1996-1999 and explore the contingent factors that influence management accounting. The study analyzed 62 responses investigated using one-way analysis, two-way analysis, and theory effect testing (Fisher, 1995). The results indicate that there are changes in management accounting and cost management that are related to changes in the accounting and business environment such as external circumstances, and changes in technology and organizational aspects such as risks within the organization. Sulaiman (2002) investigated management accounting changes in Malaysian companies over a five-year period (1997-2001) and showed the causes of the changes. The study inherits and extends the research of (Libby and Waterhouse, 1996 and Williams and Seaman, 2001). The study results conclude that most changes in management accounting are evolutionary not revolutionary and suggest new variables that improve the model developed by (Libby and Waterhouse 1996).

Otley (1980) <sup>[8]</sup> states that "Contingency theory explains a specific situation in an accounting system and their combination is appropriate". This study approaches the technical aspects of management accounting systems suitable for organizations implementing ERPS. In particular, the author is concerned only with the existence of specific techniques in an organization or their extent and usage. The author approaches this way to help research the selection of management accounting techniques that are focused and consistent with the measurement of connected variables in the management accounting system.

### 3. Method

This study uses the systematic literature review method SLR (Systematic Literature Review) of Tranfield *et al.* (2003) <sup>[10]</sup>. Sample selection for the study was based on PRISMA (priority items for systematic reviews and meta-analyses) originally proposed by Liberati *et al.* (2009) <sup>[6]</sup> and updated in 2021 by Page *et al.* (2021) <sup>[9]</sup>. The PRISMA flow diagram is based on three steps: Identification, screening, and study inclusion.

As a first step, the authors began by selecting a database to collect articles to include in the study. The database chosen is Google Scholar, known as a free database, accessible mainly through its database of references and abstracts on research topics. The research uses contingency theory in management accounting research, so this is a highly scientific database for data collection. Data were collected on December 31, 2023, with the use of the following keywords "contingency theory" and "management accounting". A total of 475 results were found from Google Scholar from 2010 to 2023.

In the second step, the author group screened to remove inappropriate documents through technical screening and content screening. For technical screening, documents in the form of: Encyclopedias, editorials, short communications, small reviews, book chapters will be eliminated by deselecting. For content screening, documents are pre-read to remove documents with irrelevant content even though they contain search keywords. The results after filtering showed that all 475 results met the filtering conditions for inclusion in the study.

The remaining number of documents after the two steps were analyzed with an overview of the SLR (systematic literature review) document system and entered into VosViewer software to analyze keywords and co-citation

analysis. The results of SLR analysis are presented in tables and graphs. The results of bibliometric analysis will be presented in visual form. From the analysis results, the study finds popular research directions, names the research directions, and suggests future research directions.

**4. Results**

**4.1 Statistics on year of publication**

From 2010 to 2023, a total of 475 articles on contingency theory in management accounting were indexed in Google Scholar with an average of 34 articles published per year.

The highest number of articles was in 2020 and 2021 (53 articles published). In 2010 and 2011, were the years with the least number of articles published (20 articles). The statistical results of the year of publication show that researchers are interested in evaluating stochastic theory in management accounting in a stable direction. This is a topic that has been of interest to many researchers over the past 14 years and the level of interest is quite consistent between years. In the period from 2020 onwards, the number of articles on contingency theory in management accounting has increased.



**Fig 1:** Chart of the number of studies over the years

Statistics by number of citations are shown in Table 1. The article "The contingency theory of management accounting and control: 1980–2014" by author D Otley, published in 2016 by Elsevier publisher is the number one article. Most cited with 1046 citations. The article “Management control

as a system or a package? Conceptual and empirical issues” by author I Grabner, F Moers, published in 2013 by Elsevier publisher is the article with the second most citations with 614 citations.

**Table 1:** Articles with the most citations

| Cites | Authors                                   | Title   | Year | Source  | Publisher        |
|-------|---|---|------|---|------------------|
| 1046  | D Otley                                   | The contingency theory of management accounting and control: 1980–2014  | 2016 | Management accounting research                | Elsevier         |
| 614   | I Grabner, F Moers                        | Management control as a system or a package? Conceptual and empirical issues                                  | 2013 | Accounting, Organizations and Society         | Elsevier         |
| 590   | RR Fullerton, FA Kennedy, SK Widener      | Lean manufacturing and firm performance: The incremental contribution of lean management accounting practices | 2014 | Journal of Operations ...                     | Elsevier         |
| 398   | RH Chenhall, F Moers                      | The role of innovation in the evolution of management accounting and its integration into management control  | 2015 | Accounting, organizations and society         | Elsevier         |
| 376   | G Baldvinsdottir, F Mitchell, H Nørreklit | Issues in the relationship between theory and practice in management accounting                               | 2010 | Management Accounting ...                     | Elsevier         |
| 369   | A Jokipii                                 | Determinants and consequences of internal control in firms: A contingency theory-based analysis               | 2010 | Journal of Management & Governance            | Springer         |
| 359   | L Cinquini, A Tenucci                     | Strategic management accounting and business strategy: A loose coupling?                                      | 2010 | Journal of Accounting & organizational change | emerald.com      |
| 330   | S Cadez, C Guilding                       | Strategy, strategic management accounting and performance: A configurational analysis                         | 2012 | Industrial Management & Data Systems          | emerald.com      |
| 329   | VM Grötsch, C Blome, MC Schleper          | Antecedents of proactive supply chain risk management—a contingency theory perspective                        | 2013 | International journal of ...                  | Taylor & Francis |
| 326   | W Qian, R Burritt, G Monroe               | Environmental management accounting in local government: A case of waste management                           | 2011 | Accounting, Auditing & Accountability ...     | emerald.com      |
| 319   | KL Christ, RL Burritt                     | Environmental management accounting: The significance of contingent variables for adoption                    | 2013 | Journal of Cleaner Production                 | Elsevier         |

**4.2 Keyword analysis results**

In the keyword analysis section, research and select keywords that appear 20 times or more. Keywords are evaluated by the software based on the number of

occurrences and total link strength. Keyword analysis results can be exported into files as images. The keyword analysis results are as follows:

| Selected                            | Term                                | Occurrences | Relevance |
|-------------------------------------|-------------------------------------|-------------|-----------|
| <input checked="" type="checkbox"/> | contingency theory                  | 633         | 2.31      |
| <input checked="" type="checkbox"/> | managerial performance              | 21          | 1.77      |
| <input checked="" type="checkbox"/> | management accounting information   | 26          | 1.72      |
| <input checked="" type="checkbox"/> | environmental management accounting | 25          | 1.61      |
| <input checked="" type="checkbox"/> | strategic management accounting     | 52          | 1.39      |
| <input checked="" type="checkbox"/> | management accounting system        | 103         | 1.32      |
| <input checked="" type="checkbox"/> | management accounting               | 322         | 1.16      |
| <input checked="" type="checkbox"/> | application                         | 28          | 0.81      |
| <input checked="" type="checkbox"/> | theory                              | 90          | 0.61      |
| <input checked="" type="checkbox"/> | management accounting practice      | 136         | 0.61      |
| <input checked="" type="checkbox"/> | management                          | 59          | 0.52      |
| <input checked="" type="checkbox"/> | performance                         | 123         | 0.50      |
| <input checked="" type="checkbox"/> | effect                              | 66          | 0.49      |
| <input checked="" type="checkbox"/> | development                         | 33          | 0.44      |
| <input checked="" type="checkbox"/> | management accounting research      | 45          | 0.42      |
| <input checked="" type="checkbox"/> | research                            | 96          | 0.30      |

Fig 2: Keywords appearing multiple times

Among the 1861 keywords, there are 26 keywords appearing 20 times or more. The group of keywords that appear 20 times or more includes contingency theory, management performance, management accounting information, environmental management accounting, strategic management accounting, management accounting system, management accounting, application, theory, management accounting practice, management, performance, effect, development, management accounting research, research. The keyword “contingency theory” is the keyword that appears the most with 633 appearances. Next is the keyword "management accounting" which is the second most frequent keyword with 322 occurrences. Next is the keyword “management accounting practice” appearing 136 times, “performance” appearing 123 times, “management accounting system” appearing 103 times.

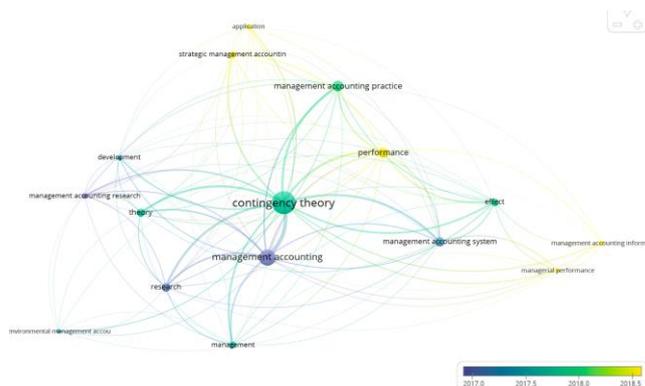


Fig 4: Keyword network over time

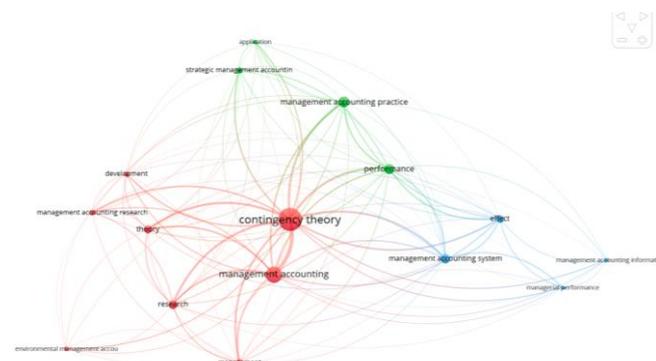


Fig 3: Co-occurrence networks

Fig 3 shows the keyword network. Note that the larger the circle, the more times it appears; the thicker the line connecting the two keywords, the greater the frequency of occurrences. Related keywords are grouped into groups, each group is a separate color. Looking at the image, it can be seen that the keywords are divided into 3 groups, 16 items with 102 links and total link strength is 2559. Group 1 is represented by red links with the keywords contingency theory, development, environmentak management, management, management accounting, research, theory. Group 2 is represented by green links with 4 keywords: Application, management accounting, performance, strategic management accounting. Group 3 is represented by blue links with 4 keywords: Effect, management accounting, management accounting system, management performance. With 3 research directions and 16 popular keywords, the results show that the research content on contingency theory in management accounting is quite comprehensive.

In addition, the results from the VOSviewer tool have shown the time of keywords appearing. Dark colors represent keywords researched from the first years (2017), in recent studies, keywords have appeared in brighter colors (2018). The keyword appearance time chart shows managerial performance and management accounting information about the keywords that have received the most attention recently. And research on contingency theory in management accounting was most researched in 2 years, 2017 and 2018.

4.3 Co-authorship analysis

To explore the tendency for collaboration in theoretical research in corporate management accounting, this study analyzed co-authorship relationships between individual authors and between organizations. According to Benoit *et al.* (2018) [2], the analysis results help improve understanding of research collaboration and help discover influential researchers. Among the 812 authors participating in writing about stochastic theory in management accounting, there are 33 authors who have participated in writing 3 times or more. These are the authors: Al mawali, H (7 articles); Brandau, M (4 articles), Fuadah, LL (4 articles); Jusoh, R (5 articles); Tayles, M (4 articles); Tjahjadi, B (4 articles).

| Selected                            | Author       | Documents | Total link strength |
|-------------------------------------|--------------|-----------|---------------------|
| <input checked="" type="checkbox"/> | al-mawali, h | 7         | 0                   |
| <input checked="" type="checkbox"/> | brandau, m   | 4         | 0                   |
| <input checked="" type="checkbox"/> | fuadah, ll   | 4         | 0                   |
| <input checked="" type="checkbox"/> | jusoh, r     | 5         | 0                   |
| <input checked="" type="checkbox"/> | tayles, m    | 4         | 0                   |
| <input checked="" type="checkbox"/> | tjahjadi, b  | 4         | 0                   |

Fig 5: Co-authors appear multiple times

## 5. Conclusion

In this study, we evaluated global publications on contingency theory in management accounting indexed in the Google Scholar database published between 2010 and 2023 to provide insights in terms of publication quantity, publication journal, keyword network and co-authorship network. This study used the bibliometric method with the help of a number of statistical and data visualization applications to explore research trends in the theoretical content of research in management accounting. Enterprise. Research results show that from 2010 to 2023, there were a total of 475 articles on contingency theory in corporate management accounting indexed in Google Scholar with an average of 34 articles published each year. The highest number of articles was in 2020 and 2021 (53 articles published). In terms of keywords among the 1861 keywords, there are 26 keywords appearing 20 times or more. The group of keywords that appear 20 times or more includes contingency theory, management performance, management accounting information, environmental management accounting, strategic management accounting, management accounting system, management accounting, application, theory, management accounting practice, management, performance, effect, development, management accounting research, research. About the author, Among the 812 authors participating in writing about stochastic theory in management accounting, there are 33 authors who have participated in writing 3 times or more. The research results have contributed to the general theoretical basis, serving as a basis for reference studies on contingency theory in corporate management accounting. Data collected from richer sources such as Scopus or Web of Science are suggestions for further research on contingency theory in management accounting.

## 6. References

1. Abdel-Kader M, Luther R. The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review*. 2008; 40(1):2-27.
2. Benoit K, Watanabe K, Wang H, Nulty P, Obeng A, Müller S, *et al.* An R package for the quantitative analysis of textual data. *Journal of Open-Source Software*. 2018; 3(30):774-774.
3. Chenhall RH, Moers F. The issue of endogeneity within theory-based, quantitative management accounting research. *European Accounting Review*. 2007; 16(1):173-196.
4. Cadez S, Guilding C. An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*. 2008; 33(7-8):836-863.
5. Ittner CD, Larcker DF. Total quality management and the choice of information and reward systems. *Journal of Accounting Research*. 1995; 33:1-34.
6. Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JP, *et al.* The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Annals of Internal Medicine*. 2009; 151(4):W-65.
7. Mia L, Clarke B. Market competition, management accounting systems and business unit performance. *Management Accounting Research*. 1999; 10(2):137-158.
8. Otley DT. The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*. 1980; 5(4):413-428.
9. Page MJ, Moher D, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, *et al.* PRISMA 2020 explanation and elaboration: Updated guidance and examples for reporting systematic reviews. *BMJ*, 2021, 372.
10. Tranfield D, Denyer D, Smart P. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*. 2003; 14(3):207-222.