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Tax Morale vs Voluntary Tax Compliance with A Bibliometric Analysis Framework

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ABSTRACT

Introduction/ Main Objectives: The objectives of this study is to explain the research progress and technology trends of AD, this study presents a bibliometric analysis. **Research Background:** The Indonesian government's 2020 revenue target is IDR 2,233.2 trillion, with IDR 1,865.7 trillion (83.54%) coming from taxes. In 2020, Indonesia changed the structure of the State Budget by refocusing and reallocating the budget to handle the spread of Covid-19, reaching IDR 3.37 trillion. **Method:** This study uses meta-analysis by reviewing and synthesizing various empirical research findings from 1998 to 2021, discussing the influence of determinants on tax compliance and tax evasion. These determinants include audits, tax rates, tax sanctions, services, public trust, personal norms, social norms, and religiosity. **Results:** The results of this meta-analysis reinforce the social contract theory and the findings of previous studies, which concluded that the level of public service and trust significantly influence tax compliance and tax evasion. Based on data and empirical evidence, this study concludes robustly that when the public is well-served and believes that the tax money paid by taxpayers is being used properly by the government, the public perceives the government as fulfilling the contract between the government and its citizens. **Conclusion:** The results of this meta-analysis show that in addition to factors influenced or controlled by the government and tax authorities, internal taxpayer factors reflected in the fiscal psychology paradigm in the form of personal norms and religiosity significantly influence taxpayers' decisions to comply or not.

Keywords: Bibliometric; Meta-analysis; Tax morale; Voluntary tax compliance

JEL Classification: M40; M41

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INTRODUCTION

The Indonesian government's 2020 revenue target is IDR 2,233.2 trillion, with IDR 1,865.7 trillion (83.54%) coming from taxes. In 2020, Indonesia changed the structure of the State Budget by refocusing and reallocating the budget to handle the spread of Covid-19, reaching IDR 3.37 trillion. While vaccine spending in 2020 was IDR 35.1 trillion and in 2021 it was IDR 13.9 trillion (Ministry of Finance, 2021). This achievement of 100% realization (even before the end of the year) of the tax target was achieved in the last 12 years, marking the peak of the Directorate General of Taxes' performance (DGT, 2021). Although inflation remained at 3.1% with a budget deficit of IDR 307.2 trillion. Achieving the aforementioned achievements in the COVID-19 pandemic is no easy feat, and this has significantly impacted various sectors, including tax authorities (Zsinol & Mustof, 2020). Target achievement is influenced by taxpayer compliance in carrying out their tax obligations.

Tax compliance is defined as the ability and willingness of taxpayers to comply with tax laws, declare accurate income for each year, and pay the correct amount of tax on time. Similarly, (James & Alley, 2004; Slemrod, 2019; Hasan et al., 2021) state that tax compliance is seen as the extent to which a taxpayer complies with tax rules and regulations. However, voluntary tax compliance is the readiness of individuals and other entities to comply with tax laws without any enforcement (Kirchler, 2007; Pali, 2010; Alabade et al., 2011; Hasan et al., 2021). Globally, tax authorities face financial management challenges.

Tax is a benchmark for the success of the overall performance of a country's government, the indicators used are per capita income, gross domestic product, tax ratio. In the economic sector in the form of lost tax revenue, which ultimately affects the social life of the community due to the decline in the government's ability to provide goods and services to the public (Marandu et al, 2015; Dul arif, 2019). For example, Crivelli et al (2016), stated that losses due to tax evasion in the long term are 1% of gross domestic product (GDP) in member countries of the Organization of Economic Cooperation and Development (OECD), and 1.5% of GDP in non-OECD countries. Tax revenue (% of GDP), International Monetary Fund, Treasury Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimates. Shows significant variation across countries covered in the report, ranging from slightly above 10% to over 45% for 2018, while during the Covid-19 pandemic, World Bank data in the OECD (2021) shows that in 2020 TR<10% (13.53%), 10%<TR<=20% (57%), 21<TR<30% (27.07%) and TR>30% (2.26%). The decline occurred in all countries, so tax compliance is again an issue that needs attention.

Tax compliance is not a new indicator, but it remains a key factor in achieving tax targets, especially with the concept of voluntary tax compliance. Various efforts have been made by tax authorities in various countries to improve tax compliance and reduce tax evasion, both in terms of organizational, human resources, and legal aspects (Alm & Torgler, 2006; Gulzan, 2021; Dul Arif, 2019).

Tax awareness has a direct positive impact through tax morale. Furthermore, trust in reciprocity, democracy, and public services play a crucial role in fostering trust and fostering taxpayer morale in voluntary tax awareness (Alm & Torgler, 2006; Torgler & Schneider, 2009; Schneider, 2015; Chatzoglau, 2021). Frey & Torgler (2007) assert that no one enjoys paying taxes; the primary reason for paying taxes on time is fear of punishment. According to Swistak (2016) and Dubin et al. (1987), tax compliance behavior is influenced by detection and punishment factors. (Erich et al., 2008; Dul Arif, 2020) argue that the power of tax authorities has a strong impact on taxpayer compliance.

The influence of personal norms, such as morality, on tax compliance is generally positive (Christian & Alm, 2014; Coricelli, Joffily, Montmarquette, & Villeval, 2010). However, some studies suggest that the role of personal norms in increasing tax compliance is less convincing (Luttmer & Singhal, 2014). In general, the role of social norms and behavior in increasing tax compliance shows a positive influence, as demonstrated in studies conducted by Alm, Bloomquist, & McKee (2017), Kasper, et al. (2015), and Hallsworth, et al. (2014). The same conclusion was also conveyed by Lefebvre, Pestieau, Riedl, & Villeval (2015), who stated that a permissive environment and social norms towards tax non-compliance will encourage someone to do the same. Meanwhile, although generally showing a positive relationship, various studies on the role of religion in encouraging tax compliance have not shown consistent results (James O Alabede, 2014; Bizoi, 2014; Christian & Alm, 2014; Vishnevsky & Gurnak, 2015). This is also supported by Batrancea, et al., (2019), who studied tax compliance in 44 countries showing that trust in government and power is a major factor, but how trust will be formed, of course, there needs to be impressive and trustworthy behavior, good behavior will certainly be embellished with morals, morals will be good if several supporting factors are religiosity, leadership and spiritual culture are built (Andriani & Djalal, 2019).

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Given the variety of factors influencing both voluntary and enforced tax compliance, resulting in inconsistent results, this study offers a solution. However, this study does not explore the influence of these variables in detail (beyond the scope of this study). Of the numerous studies on tax compliance, only one was indexed by Scopus with meta-analysis and conducted manually (without using analysis software). This study discusses in more detail the service and hoftede culture associated with tax avoidance (Nurkholis & Dul Arif, 2019; Nurkholis & Dul Arif, 2020). Religious conformity and religiosity are also key considerations in assessing tax compliance (Carsamer & Abbas, 2020). The use of scientific information from published documents can identify research trends and gaps in a field, making research gaps more visible and providing more accurate recommendations. Recently, bibliometric studies have been widely used to disseminate prospects in various research fields, by using tested software, the results of clustering mapping will be more accurate, although there are some shortcomings (not suitable if the data is qualitative).

Therefore, to explain the research progress and technology trends of AD, this study presents a bibliometric analysis. First, a search was conducted between 1980 and 2020 to observe global research trends. Then, the timeframe focused on the last five years of publication (2015–2020), aiming to summarize the technological advancements and current development trends for AD processes from a bibliometric perspective. Unlike previous review articles that used literature searches to identify and explain key concepts and advances in a specific field, this study focuses on a broad analysis of AD to identify key gaps that still need to be addressed in the field.

This study has four main contributions. First, to the author's knowledge, this is the first study to explicitly conduct a bibliometric study of voluntary tax compliance and tax morale. Previous studies have used manual meta-analyses and focused on tax avoidance, tax evasion, and tax compliance. The decision to combine them is significant as one of the strands of literature on taxation and tax behavior, particularly on religiosity and tax morale, is discussed (Torgler, 2006; Chatzoglou & Fotiadis, 2021).

Second, a literature review of the top 20 publications on voluntary tax compliance and tax morale highlights ongoing research trends—for example, what factors influence voluntary tax compliance, how tax morale influences tax target achievement in developing countries, how religiosity influences tax morale, and the role of behavior in decision-making regarding compliance and trust in the government. This suggests ample scope for future research work such as exploring managerial behaviors (personality traits, self-control or the role of emotions) that may influence dynamics within formal or informal settings.

Third, this study provides a network analysis using VOSviewer, which provides important insights when identifying themes. Previously, in Costa et al.'s (2019) study, the authors used Citespace software to visualize emerging trends. Network analysis using VOSviewer provides a range of analyses, including keyword co-occurrence, author and source (journal) bibliography associations, and interconnected variables.

Finally, this study contributes to plotting research from the sources used, highlighting research trends that have been extensively researched but are still emerging, as well as understudied but emerging issues. The use of scientific information from published documents can identify research trends and gaps in a field. Recently, bibliometric studies have been widely used to disseminate insights across various research fields, including medicine and science (Ferrari et al., 2020; Obileke et al., 2020; Zhang et al., 2021b), and to a lesser extent, social sciences (Singh, 2021).

RESEARCH METHOD

Current research on tax compliance is generally divided into two main models. The first type is theoretical research to develop an economic model of tax compliance. This type of research generally builds on key theories, such as the Economic Taxation and Taxation Unit (EUT), and then creates an economic model that fits the variables used. Although both models are in the form of models, the conclusions regarding the relationship between tax determinants and tax compliance vary. For example, some models suggest that audits and sanctions will increase tax compliance (Bayer & Cowell, 2016; Escobari, 2012; Feltham & Paquette, 2002), while others argue the opposite or are neutral (Cremer & Gahvari, 1993; Kuchumova, 2017; Tsai & Yang, 2009). The second type is empirical research on how various factors influence tax compliance. The results of this research also vary, as it is possible for the same type of factor to yield different, sometimes even contradictory, conclusions from different studies.

RESULT AND DISCUSSION

The bibliometric study used scientific output data from the Science Citation Index Expanded (SCI-E) core collection – ISI Clarivate Analytics Scoupus and was conducted as presented in Figure 1. The type of search applied was "advanced search" applying the following logical operations: TS= ("anaerobic digestion") NOT KP= ("anaerobic digestion"), to obtain reliable and accurate details based on the selected words included in the title, abstract, author keywords, and not in the keywords-plus each document on the topic. The document types were filtered into "article" and "review". A systematic search was conducted using two different time ranges. First, the search was conducted in the time range 1989 to 2021, aiming to observe the evolution of publications from year to year and the most frequent research areas (a total of 2,326 publications).

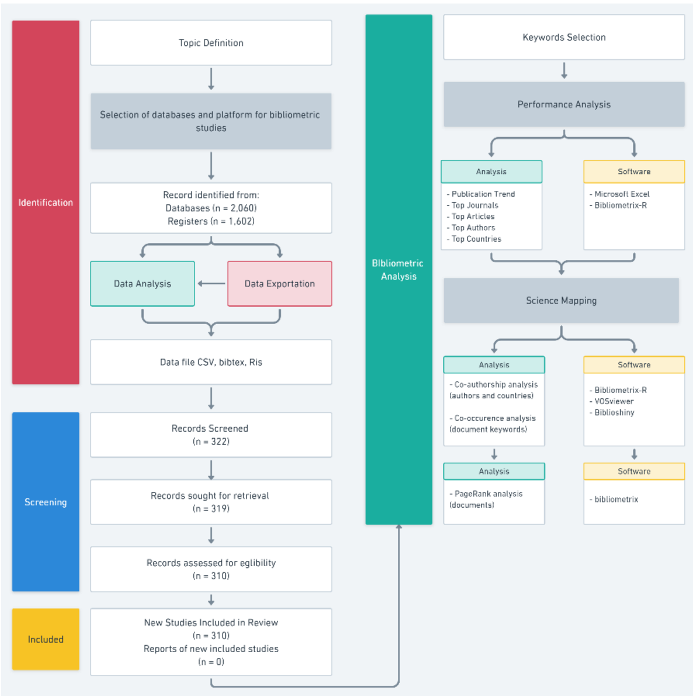

Figure 1. Prisma Flow Diagram Collaboration with Whimsical

Data was searched from Scopus, the search results with the Boolean operator "OR" showed 2,326 articles, after studying this data, it showed two different research questions, then in the Boolean operator space with "AND" the data obtained were 358 articles, However, when the search was limited to the document type only as "Article" or "Review" and language as "English", the search results returned 310 documents. Data sets from documents obtained in

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the last five years were exported and analyzed on bibliometric software. The "Bibliometrix" package (R language) was used to obtain a plot of three fields and the production of top authors over a time diagram. After that, the data set was investigated in VOSviewer software to build a network of authors, sources and countries, and keyword groups of authors.

All data used in the bibliometric analysis were obtained from Scopus. The most cited documents and the most prominent issues discussed in each section were evaluated to understand the importance and impact of various aspects of VTC and TM. Furthermore, several references were accessed and studied in more detail. Furthermore, documents were considered in the context of bibliometric findings, aiming to understand related interests and thus enable the formulation of constructive discussions for the VTC and TM research field.

The results of the bibliometric analysis on VTC and TM are presented in the following sections, showing the most prominent research areas, keywords, authors, journals, and others. Keywords were used for author keywords. Each section of the results is discussed to provide in-depth data on research progress, trends, and updates on VTC and TM. The overview of journal quartile data shows that 45.16% of journals are in quartile 1, with only journals and reviews being used for data collection. Based on the year of publication, there is an increasing trend in the writing (reading from right to left).

Figure 2 shows the evolution of publications over the years. This first analysis was conducted to see the total number of documents published by Scopus in the field of VTC TM slices from 1998-2021. A total of 2,060, with a total of publications per year averaging 3-8 articles, but the development from 2008-2021 experienced a significant increase, also an exponential increase in the number of publications related to VTM and TM represents the interest of researchers in the subject and the worldwide trend in moving in line with the existence of tax reform, almost in all countries starting in 2008. On the other hand, the published data tends to be heterogeneous, this is seen in the distribution of publications to each journal at least 1 and more than 70% while publications in journals there are >2. This shows the thematic VTC and TM are themes that appear together in the country. Other results were also shown by Dul Arif (2019), the existence of research variations in the field of taxation with a small range is also seen from the standards given by Doucouliagos (2011), although smaller than Cohen (1988), but is considered more precise so that it is widely used as a reference in meta-analysis research in the economic and social fields (A. Abdullah, et al., 2015; Alptekin & Levine, 2012; Arestis, Chortareas, & Magkonis, 2015; Babecky & Havranek, 2014; Dimos & Pugh, 2016; Valickova, Havranek, & Horvath, 2015). Cohen himself uses a standard of 0.1 for a small effect, 0.3 for a moderate effect, and 0.5 as the minimum number of large effects.

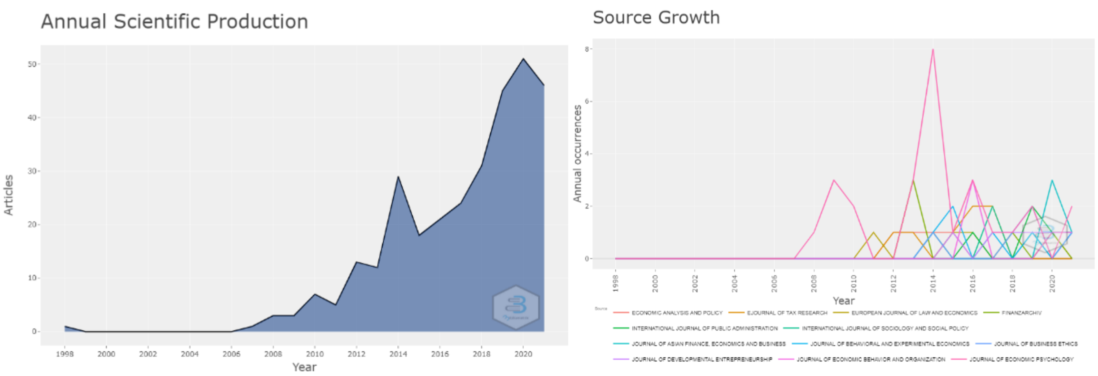

Figure 2. Distribution of Publications by Year of Publication

The bibliometric analysis results show the distribution of data in Table 3, namely from 1998-2021 there were 190 journals, 310 documents with an average of 3.86/4 publications per year. The use of keywords (author's keywords) was 719, with single-authored documents, so there is not much collaboration between authors, however, in this analysis it can be seen that on average each author has written more than once with the same theme, there are 190 authors (61.4%), as explained in Table 1.

Tabel 1. Main Information About Data Scoupus per Desember 2021

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1998:2021
Sources (Journals, Books, etc)	190
Documents	310
Average years from publication	3,86
Average citations per documents	18,31
Average citations per year per doc	2,303
References	18130
DOCUMENT TYPES	
Article	296
Review	14
DOCUMENT CONTENTS	
Keywords Plus (ID)	216
Author's Keywords (DE)	719
AUTHORS	
Authors	620
Author Appearances	888
Authors of single-authored documents	44
Authors of multi-authored documents	576
AUTHORS COLLABORATION	
Single-authored documents	59
Documents per Author	0,5
Authors per Document	2
Co-Authors per Documents	2,86
Collaboration Index	2,29

Source: data processed

The authors' collaboration in this research is not evenly distributed, the dominant authors are Kirchler, Wahl I, and Torgler, and group 2 is Alm & Toegler. 9 appears in red for cluster 1 and green for cluster 2, while cluster 3 is Fochmann, and group 4, which has a small number of articles but has a wide network (blue), is ALM J, but from the author network, all clusters are connected to each other. A more complete explanation is in figure 3, while figure 4 shows the development of authors writing research from 2021 to 2021. This author is still productive, even the themes developed show increasingly yellow colors, meaning there is a development in taxation themes.

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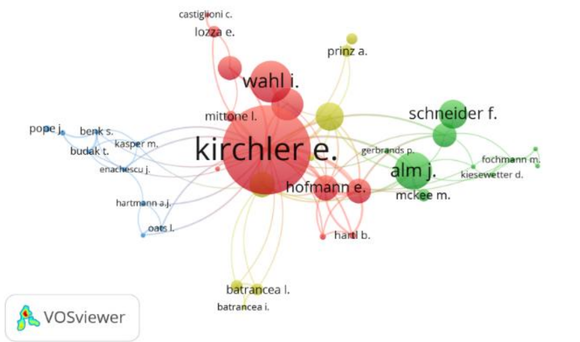

Figure 3. Main informastion by clustering author

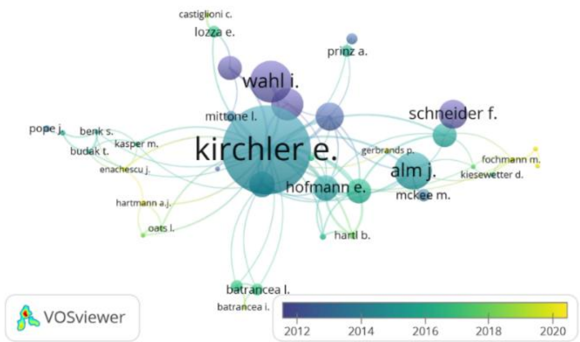

Figure 4. Main informastion by clustering author publish per year

As an explanation, the data shows the number of details of data processing using standard keyword authors and is ranked based on the largest citations in Scopus through data import in the form of meta data (Ris, Bip, and CSV) as in Figure 5.

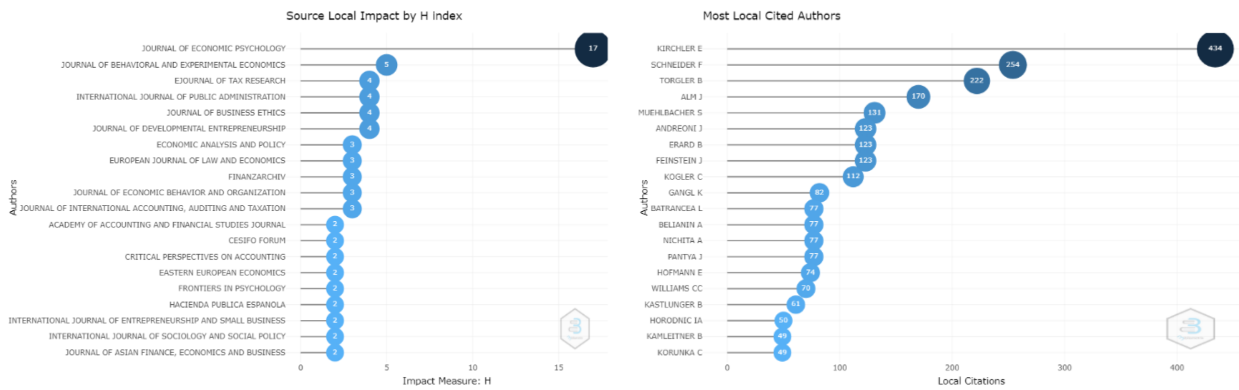

Figure 5a. Source local impact by H-Index

Figure 5(b) presents the production of the top 20 authors over the years (1998–2021), showing the number of articles (circle size) and total citations per year (circle color).

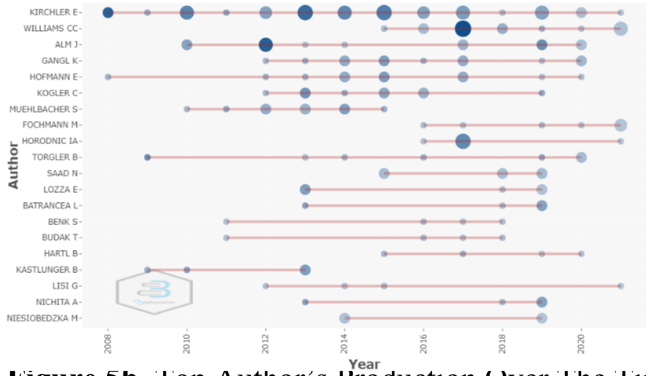

Figure 5b. Top Author´s Production Over The Time

In Figure 6, the authors in this analysis are dominated by the United Kingdom, with Indonesia ranked 7th in publications in internationally reputable journals indexed by Scopus for the VTC and TM themes. However, what is unique is that the corresponding author's country is a single corresponding country, indicated by the color green only, similar to Poland, indicating a lack of research collaboration with other countries, thus Indonesia's MCP ratio is 0 (zero). This is a motivation and reference for future authors (Table 2).

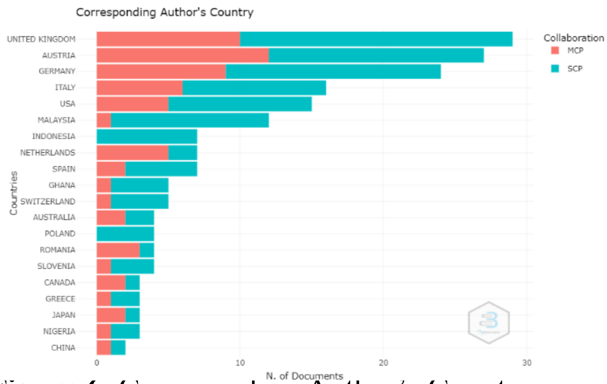

Figure 6. Coresponding Author´s Country

Table 2. Calculation of the MCP Ratio from Scopus Sources as of December 2021

Country	Articles	Freq	SCP	MCP	MCP_Ratio
UNITED KINGDOM	29	0,13615	19	10	0,3448
AUSTRIA	27	0,12676	15	12	0,4444
GERMANY	24	0,11268	15	9	0,375
ITALY	16	0,07512	10	6	0,375
USA	15	0,07042	10	5	0,3333
MALAYSIA	12	0,05634	11	1	0,0833
INDONESIA	7	0,03286	7	0	0
NETHERLANDS	7	0,03286	2	5	0,7143
SPAIN	7	0,03286	5	2	0,2857
GHANA	5	0,02347	4	1	0,2
SWITZERLAND	5	0,02347	4	1	0,2
AUSTRALIA	4	0,01878	3	1	0,25

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Country	Articles	Freq	SCP	MCP	MCP_Ratio
POLAND	4	0,01878	4	0	0
ROMANIA	4	0,01878	1	3	0,75
SLOVENIA	4	0,01878	3	1	0,25
CANADA	3	0,01408	1	2	0,6667
GREECE	3	0,01408	2	1	0,3333
JAPAN	3	0,01408	1	2	0,6667
NIGERIA	3	0,01408	2	1	0,3333
CHINA	2	0,00939	1	1	0,5
FRANCE	2	0,00939	1	1	0,5
KOREA	2	0,00939	2	0	0
PORTUGAL	2	0,00939	2	0	0
ZIMBABWE	2	0,00939	1	1	0,5
BARBADOS	1	0,00469	0	1	1
BRAZIL	1	0,00469	1	0	0
COLOMBIA	1	0,00469	0	1	1
CYPRUS	1	0,00469	0	1	1
CZECH REPUBLIC	1	0,00469	1	0	0
EGYPT	1	0,00469	1	0	0
ESTONIA	1	0,00469	1	0	0
FINLAND	1	0,00469	0	1	1
HONG KONG	1	0,00469	1	0	0
HUNGARY	1	0,00469	1	0	0
ISRAEL	1	0,00469	1	0	0
JORDAN	1	0,00469	1	0	0
LEBANON	1	0,00469	1	0	0
LITHUANIA	1	0,00469	1	0	0
NAMIBIA	1	0,00469	0	1	1
NEW ZEALAND	1	0,00469	1	0	0
PAKISTAN	1	0,00469	0	1	1
PERU	1	0,00469	1	0	0
SLOVAKIA	1	0,00469	1	0	0
SOUTH AFRICA	1	0,00469	1	0	0
TURKEY	1	0,00469	1	0	0

Source: data processed

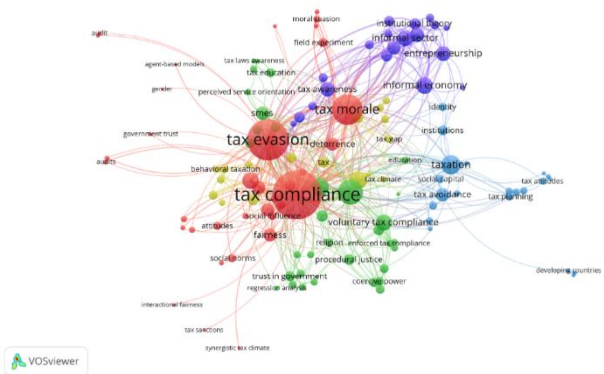

Figure 7. Visualization of Keyword Occurrence Network

Keyword co-occurrence analysis within a research field can be a tool for identifying research hotspots and frontiers (Ye et al., 2020). Figure 7 shows a grouping of 133 keywords most frequently used by authors, with a minimum of two occurrences in each paper. A bibliometric search using Vosviewer yielded 722 keywords from at least two journals. This resulted in 133 keywords being used as analysis material by the researchers.

The analysis results have combined bibliometrics with Vosviewer through research treatments, which are presented in this study. In this type of map, colors indicate different groups, and the construction of groups is based on the relationships between items, resulting in groups of closely related elements. In general, the most frequently used keywords in the selected documents are ranked according to the highest link strength, with the formation of five clusters. The color and centrality of the circles indicate the relationships between keywords, while the size of the aperture indicates the popularity of the selected theme. Vosviewer results show five clusters, as follows:

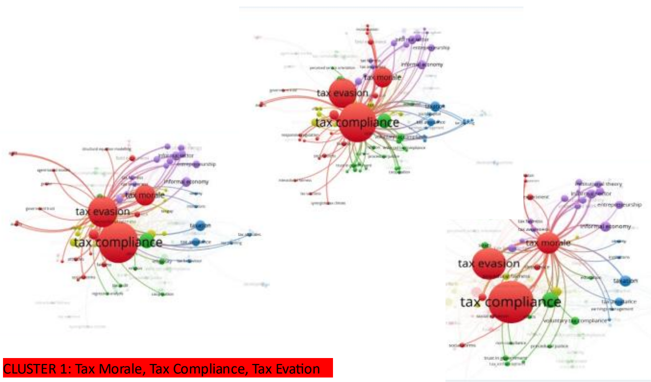

Figure 8. Cluster 1 (Red): Tax Morale, Tax Compliance, Tax Evation)

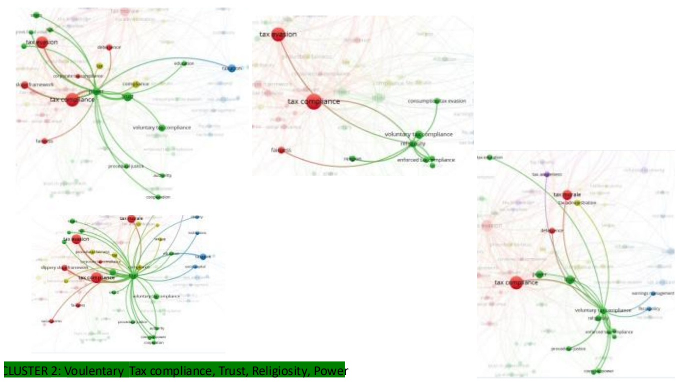

Figure 9. Cluster 2 (Greem): Voulentary Tax Compiance, Trust, Rekigiosity, dan Power

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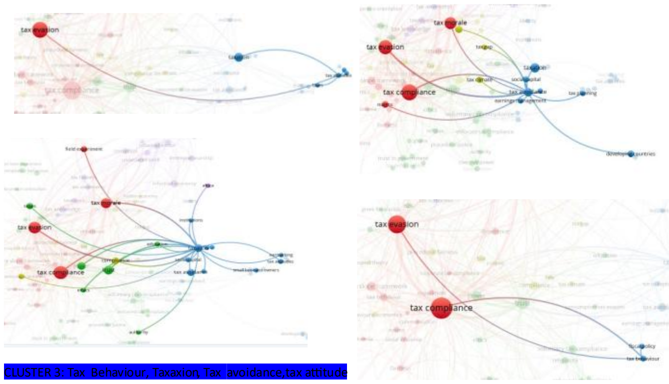

Figure 10. Cluster 3(Blue): Tax Behaviour, Taxaxion, Tax Attitude

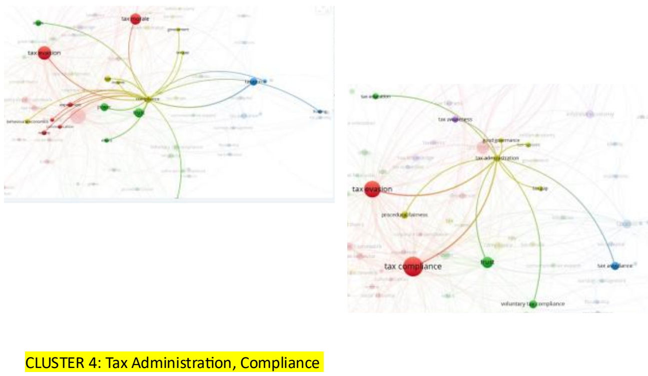

Figure 11. Cluster 4 (Yellow): Tax Administration, Compliance)

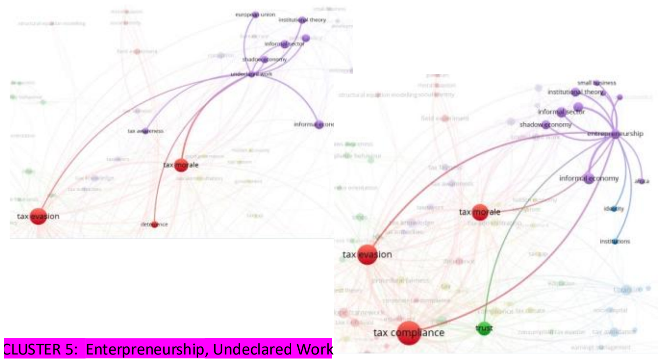

Figure 12. Cluster 5 (Purple): Enterpreneurship dan Undeclared Work

The overlay of the results of the bibliometric analysis shows developments from year to year, so it can be seen that the themes of voluntary tax compliance and tax morality are changing using bibliometric analysis.

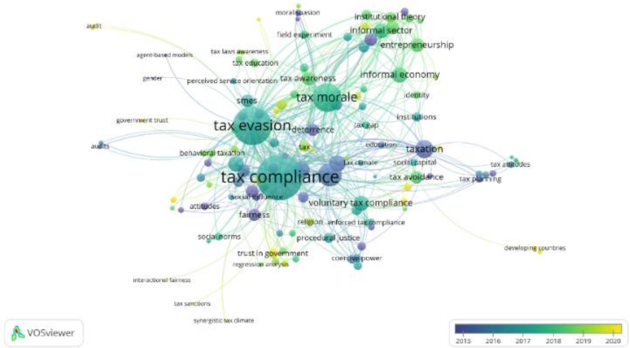

Figure 13. Overlay Vizualization with Keywords

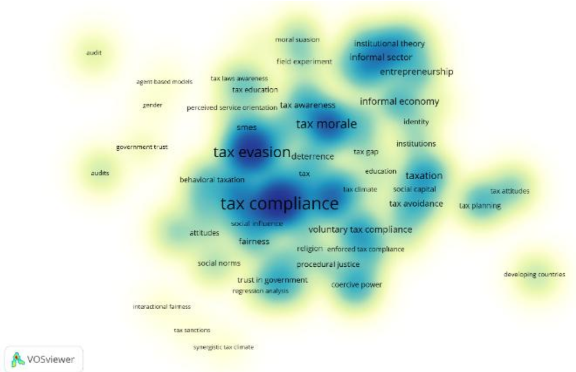

Figure 14. Density Visualization with Keywords

CONCLUSION

This study uses meta-analysis by reviewing and synthesizing various empirical research findings from 1998 to 2021, discussing the influence of determinants on tax compliance and tax evasion. These determinants include audits, tax rates, tax sanctions, services, public trust, personal norms, social norms, and religiosity. Audits, rates, and sanctions are known as the law enforcement paradigm or deterrence approach. Services and public trust are categorized under the service and trust paradigm. Personal norms, social norms, and religiosity are categorized under the fiscal psychology paradigm.

The results of this meta-analysis reinforce the social contract theory and the findings of previous studies, which concluded that the level of public service and trust significantly influence tax compliance and tax evasion. Based on data and empirical evidence, this study concludes robustly that when the public is well-served and believes that the tax money paid by taxpayers is being used properly by the government, the public perceives the government as fulfilling the contract between the government and its citizens. In return, citizens will be encouraged to comply with their taxes, and involvement in tax evasion is unacceptable.

On the other hand, the findings of this meta-analysis indicate that a deterrence approach based on the law enforcement paradigm is ineffective in increasing compliance and reducing tax evasion. Increased audits and tax sanctions, which expected utility theory predicts would encourage increased compliance and reduce tax evasion, have proven ineffective in preventing taxpayers from evading taxes or motivating them to pay their taxes properly. Similarly, efforts to use the tax rate mechanism as a means to encourage compliance and reduce tax evasion, as predicted by prospect theory, do not receive robust support from this study. Therefore, this

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study supports the opinion of several researchers who doubt the effectiveness of the deterrence approach in increasing compliance or reducing tax evasion.

The results of this meta-analysis also show that in addition to factors influenced or controlled by the government and tax authorities, internal taxpayer factors reflected in the fiscal psychology paradigm in the form of personal norms and religiosity significantly influence taxpayers' decisions to comply or not. Thus, this research based on the synthesis of empirical evidence confirms the theory of planned behavior and the findings of previous studies that emphasize the importance of internal motivation in influencing taxpayers' decisions to pay taxes. Meanwhile, social norms that are expected to encourage people to be more compliant and prevent tax evasion are not confirmed by the results of this meta-analysis. The results of the meta-analysis related to moderator variables in this study strengthen several previous meta-analyses in the accounting field that have concluded that differences in the measurement of independent variables have a moderating function and are one of the causes of variability in the relationship in several studies.

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