Exploring Value-Added Tax Impact on Middle and Low-Income Citizens: A Bibliometric Analysis

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Abstract
This study aims to perform a comprehensive bibliometric analysis of impacting Value-Added Tax (VAT) on the standard of living of middle and low-income citizens. To reach our goal, we used the PRISMA protocol and VOSviewer to find the relevant documents in the Scopus database between 2004 and May 2024. A total of 481 papers were analyzed. The study revealed that the USA and China led in published papers on VAT research, with 83 and 68 papers respectively. Most authors contributed fewer than five papers, but Keen, M., and Omodero, C.O. stood out as the most prolific with five papers each. "International Tax And Public Finance" emerged as the most prolific journal with 16 papers and 138 total citations (TCs). "Firm investment and exporting: Evidence from China's value-added tax reform" was the most cited paper with 202 citations. The findings also emphasized the need for nuanced policy design to mitigate adverse effects of VAT while promoting sustainable development. Additionally, this study underscores the challenge VAT poses to redistribution theory, emphasizing the need for fair taxation policies. Furthermore, policymakers must address VAT's regressive nature through targeted relief measures and social welfare programs to mitigate its impact on vulnerable populations. Through this examination, the study underscores the complex interplay between VAT policy, academic inquiry, and socioeconomic outcomes, providing valuable insights for policymakers and researchers alike.

Keywords: Bibliometric Analysis, Value-Added Tax, VAT, Taxation, Income Tax, Scopus Database

Introduction
Value-added tax (VAT) represents a significant component of tax systems globally, with over 165 countries adopting this taxation method, thereby substantially contributing to worldwide tax revenue (Adhikari, 2020; De la Feria & Schoeman, 2019). Particularly in developing countries, there is a prevailing consensus on the reform of indirect taxes, focusing on the reduction of trade taxes and the augmentation of VAT to bolster revenue generation (Emran & Stiglitz, 2005; Gnangnon, 2023). The Value-Added Tax (VAT) is widely recognized as an efficient tax system and is extensively adopted across various jurisdictions (Brockmeyer et
This tax mechanism plays a pivotal role in modern tax systems (Keen & Lockwood, 2010; Sun et al., 2020; Wu et al., 2012). Factors such as taxpayer services, simplified tax systems, computerized tax payments, tax audits, and the adoption of electronic tax systems have been identified as crucial for enhancing VAT compliance (Erick et al., 2024; Rwakihembo et al., 2024). In certain Middle Eastern countries, the use of digital platforms has been explored as a method to facilitate VAT collection (Alaradi & Moossdorff, 2024; Melhem et al., 2024). To improve the efficiency of VAT systems, performance-based ratemaking over cost-of-service rate-making has been suggested, especially to prioritize objectives like grid resiliency and promote the adoption of technologies like microgrids (Cochran, 2024). Furthermore, research has examined the impact of forensic accounting, tax penalties, and government spending on VAT evasion, highlighting the significance of these elements in combating tax evasion (Khaltar, 2024; Ozili, 2020).

The introduction of VAT has been associated with economic growth and development, exemplified by the Kingdom of Bahrain’s implementation aiming to stimulate economic expansion and address associated challenges (Bansal & Alfardan, 2020). Despite the myriad benefits of VAT, significant challenges such as tax equity and tax administration efficiency persist as crucial considerations for countries implementing or reforming their VAT systems (Świstak et al., 2015). Value-added tax (VAT) functions as a multi-staged tax applied to the value added to goods and services at different stages of production and distribution (Ul Haq & Masudi, 2023).

VAT implementation has garnered widespread interest due to its profound impact on revenue and tax systems. The European Union (EU) has a unified system of VAT implemented by Directive 2006/112/EC, highlighting VAT policies (Al Mazroui et al., 2023). Economists advocate for tax policy reforms to enhance efficiency and equity in tax systems (Johnson, 2023). Studies have examined the implications of Goods and Service Tax (GST) on revenue efficiency in India (Garg et al., 2023). VAT, described as a consumption tax, significantly contributes to economic variables and is challenging to evade (Osamor et al., 2023). Transitioning to a consumption-based VAT system facilitates VAT input tax deductions for firms acquiring fixed assets (Wang et al., 2024). VAT has been a steady income source for governments, crucial for financial stability (Bikas & Raškauskas, 2011; Mgammal et al., 2023). VAT implementation has enhanced tax stability and revenue diversification in developing countries (Darshini & Gayithri, 2023). Mobility reductions and confinement measures impact VAT collection, a vital fiscal revenue source (Wagner & Lucas, 2023). In the realm of tax reforms, VAT has emerged as a potential replacement for sales tax in some countries, aiming to bolster revenue collection and foster development across various governmental levels (Omesi & Nzor, 2015). Tax reforms, including VAT changes, positively affect tax revenue performances in various countries (Bayale et al., 2023). Joint tariff and VAT reforms can lead to increased tax revenue through better compliance and a broader VAT base (Yousefi & Vesal, 2023).

Studying the impact of Value-Added Tax (VAT) on the standard of living of middle and low-income citizens is imperative due to several compelling reasons. VAT stands as a pivotal source of revenue for governments Adhikari (2020), and comprehending its ramifications on diverse income groups is paramount for informed policy formulation (Anyaduba & Otulugbu, 2019). Extensive research has underscored VAT’s potential to influence economic growth (Nwanakwere, 2019), and its public acceptance hinges upon factors such as income inequality and economic stability (Mahadianto et al., 2019; Shukeri & Alfordy, 2021). Furthermore, VAT assumes a role in advancing Sustainable Development Goals (SDGs) pertaining to poverty and
inequality alleviation (Shakoor & Shah, 2022). The efficacy of VAT as a tax mechanism warrants careful consideration, particularly for low and middle-income nations (Mascagni et al., 2021). Moreover, alterations in VAT rates can impact enterprise expenses (Liu et al., 2022), with optimal VAT rates holding significance for countries across varied income strata (Parodi, 2024). Additionally, VAT revenue stands subject to diverse influences such as implicit tariffs and government efficacy (Permadi & Wijaya, 2022). A nuanced comprehension of VAT’s implications for different income cohorts can inform the crafting of tax policies conducive to economic development and the amelioration of the standard of living for middle and low-income citizens (Osarumwense & Igor, 2023).

However, the introduction and escalation of VAT can yield regressive outcomes, disproportionately burdening low-income individuals by curtailing their disposable income and distorting savings and private domestic investment (Chindengwike, 2022). This phenomenon can precipitate hardships for low-income earners and culminate in elevated commodity prices, adversely affecting the standard of living of middle and low-income citizens (Dianda et al.; Okello Candiyi Bongomin et al., 2024). The research underscores VAT adoption’s potential to exacerbate income-based inequality while leaving consumption inequality unaffected (Qi et al., 2020). Moreover, VAT’s impact on economic growth can vary contingent upon its design and implementation. For instance, elevating VAT through the standard rate or C-efficiency can yield divergent effects on long-term growth (Acosta-Ormaechea & Morozumi, 2021). Additionally, the repercussions of VAT reform on diverse outcomes, such as regional innovation capability, have garnered attention, accentuating the need to grasp the broader ramifications of VAT policies (Cai & Harrison, 2021). Furthermore, VAT enforcement mechanisms assume a pivotal role in determining its efficacy. VAT’s inherent incentive structure is believed to facilitate enforcement via third-party reported paper trails, thereby deterring tax evasion and enhancing compliance (Pomeranz, 2015). A nuanced understanding of the compliance costs associated with VAT, particularly among small and medium enterprises, is indispensable for evaluating its impact on businesses and the economy (Ramli et al., 2015). The research problem addressed in this study revolves around the impact of Value-Added Tax (VAT) on the standard of living of middle and low-income citizens, with a focus on understanding its implications for income distribution, economic growth, and overall welfare.

Aware of the growing interest in value-added tax (VAT), several studies analyzing scientific production on VAT have already been published (Al Mazroui et al., 2023; Duvendack & Mader, 2020; Sharma & Arora, 2024; Yeldu et al., 2023). However, no previous research was performed to map the (value added tax OR VAT) AND (economy OR economic) research production in the Scopus database. Therefore, this study differs from other review papers concentrating on the global academic research trends of studies between 2004 and May 2024 on the Scopus database. To this end, this study tries to fill the gap in the scientific literature. This study aims to provide a comprehensive bibliometric analysis of (value added tax OR VAT) AND (economy OR economic), identifying the most prolific countries, academic institutions, authors, and journals. In addition, the articles with the highest numbers of citations, the co-citation network of authors and papers, and the hot keywords with occurrences will be determined. The main contributions and steps of this bibliometric analysis study are summarized and listed as follows:

1. To identify the growth of annual scientific publications based on journals’ outputs.
2. To identify the overall performance, such as productive countries, institutions, journals, and authors.
(3) To identify the most prominent themes/keywords in the (value added tax OR VAT) AND (economy OR economic).

(4) To identify the most-cited articles to be considered in future studies.

The structure of this research is as follows: Section 2 provides the literature review of the topic. Section 3 outlines the methodology employed in this study. Section 4 is concerned with a bibliometric analysis of pertinent literature. Section 5 discusses the results of the paper. Section 6 provides concise conclusions. Finally, Section 7 presents the study's limitations and potential future directions.

Literature Review

The extensive body of research on VAT provides significant insights into its varied roles and implications for different socioeconomic groups. Scholars have examined its impact on the complexity of tax systems Fleming Jr (2022), its function in capturing value addition at various production stages (Ul Haq & Masudi, 2023), and its importance in generating tax revenue (Mjaku, 2020). Studies have also analyzed VAT's effect on income distribution in middle-income countries Naderi & Salatin (2018) and the consequences of changes in VAT rates for key stakeholders such as governments, businesses, and individuals (Prasad, 2023). Recognized as a fundamental component of modern tax systems Brockmeyer et al (2024), VAT faces challenges including non-compliance, insufficient infrastructure, and a lack of public awareness (Yeldu et al., 2023). Initiatives to improve VAT administration focus on enhancing efficiency, reducing the shadow economy, and addressing tax fraud (Kowal & Przekota, 2021).

Furthermore, VAT has been found to potentially hinder economic activities, negatively impacting production and consumption (Obeng, 2018). Although its introduction may initially increase the consumer price index, it can later stimulate investments and exports (Necula et al., 2022). VAT withholding tax is a crucial mechanism for preventing revenue leakages, highlighting its importance in revenue collection (Majoni, 2021). Studies show that the impact of VAT varies across income groups, with developed countries benefiting more from VAT revenue compared to lower- and upper-middle-income countries, especially in contexts of trade openness (Azaria & Robinson, 2005). Additionally, the implementation of VAT results in significant differences in cash flow patterns among organizations, underscoring its varied effects on economic actors (Salia, 2016). Preferences for maintaining VAT policies indicate a level of acceptance and stability, with certain regions favoring current VAT rates (Lazović-Pita & Štambuk, 2015). Moreover, the efficiency of the VAT system is correlated with the basic VAT rate and the number of preferential rates, which influence tax gaps (Kowal & Przekota, 2021).

The implementation of VAT, including the goods and services tax (GST), has been adopted by many countries worldwide (Sharma & Arora, 2024). Scholars have examined the effects of VAT policy changes on market liquidity, trading volume, and stock performance, thereby highlighting the broader economic implications of tax policies (Blanchette, 2023). Additionally, research has explored VAT's relationship with various socioeconomic factors, such as its impact on the manufacturing sector, government revenue, and overall economic growth (Effiong et al., 2024; Ngari et al., 2024). Studies investigating VAT compliance gaps have shed light on factors influencing VAT collection, including the shadow economy, final consumption, and economic prosperity (Cuceu, 2024). Furthermore, research on the digitalization of tax administration underscores the role of e-government in improving tax compliance and revenue generation (Djafri et al., 2023). The digitalization of tax systems,
which includes electronic reporting and payments, has been recognized as an effective strategy to combat tax evasion and enhance tax revenues (Frățilă et al., 2023). Countries like the Republic of Korea have successfully implemented digital transformations in their tax administration to increase revenue collection, serving as a potential model for other nations (Kim, 2023).

One significant finding from these studies is the disproportionate burden that VAT can place on low-income individuals. Research indicates that VAT policies, especially when implemented without adequate safeguards or exemptions, can result in higher prices for essential goods and services, thereby diminishing the purchasing power of low-income households (Necula et al., 2022; Obeng, 2018). This regressive impact of VAT can exacerbate income inequality and hinder efforts to improve the standard of living for vulnerable populations. Additionally, changes in VAT rates or policies can affect consumption patterns and discretionary spending among middle-income households, potentially leading to adjustments in their overall financial behavior (Prasad, 2023). Middle-income individuals may also experience indirect impacts of VAT through changes in business practices, employment opportunities, and overall economic conditions influenced by VAT policies.

The impact of VAT on middle-income citizens assumes heightened significance in numerous countries, particularly within low- and middle-income economies, necessitating comprehensive examination. VAT, characterized as a form of indirect taxation, has garnered attention for its implications on economic growth (David et al., 2024). Notably, middle-income individuals bear a considerable portion of this tax burden, as underscored by resistance to VAT rate increases amid fiscal reforms in South Africa (Inchauste et al., 2017; Schoeman et al., 2022). Moreover, research linking per capita income and mortality during the COVID-19 pandemic underscores the far-reaching socioeconomic ramifications of measures like VAT, particularly impacting middle-income countries (Filho et al., 2024). Therefore, policymakers must heed the implications of VAT on middle-income citizens, as evidenced by research elucidating the nexus between economic growth, individual investment, and wealth creation in Ghana (Kornu et al., 2024).

Studies have shown that VAT has an impact on middle-income individuals even after considering specific expenditures (Lee et al., 2013). Additionally, research has indicated that VAT, along with other taxes like corporate income tax and social security contributions, can have a positive impact on gross domestic product (GDP) (Kalaš et al., 2018). It has been recommended that governments should focus on increasing VAT as it has the potential to improve economic development (Olaoye et al., 2019). Moreover, economic downturns, such as those precipitated by the COVID-19 pandemic, can lead to dwindling VAT revenue streams for governments, thereby impeding their capacity to extend services and assistance to middle-income citizens (Mascagni & Lees, 2021). Policymakers are thus tasked with scrutinizing the equitable and redistributive implications of taxation reforms to forestall disproportionate burdens on middle-income strata (Liu & Lu, 2015).

Moreover, VAT rate adjustments can markedly alter a country’s financial intensity and tax landscape (Mgammal et al., 2023). Additionally, the differential effects of VAT across income strata are discernible, with lower- and middle-income countries confronting distinct impacts vis-à-vis their high-income counterparts (Wang et al., 2023). Concerning income inequality, fiscal measures such as VAT modifications exert redistributive influences, shaping various income distribution metrics and social expenditures like healthcare and education (Isiaka et al., 2024). Additionally, the interplay between income levels, institutional robustness, and foreign direct investment (FDI) moderates VAT policy effects on economic
growth, with well-established institutions potentially amplifying FDI's positive contributions across diverse income groups (Silajdzic & Mehic, 2022). Furthermore, the indirect influence of home country institutions on the economic growth induced by outward FDI is an area that necessitates further investigation (Osarumwense & Igor, 2023).

The impact of VAT on the standard of living of low-income individuals stands as a pressing concern globally (Edeh, 2021). VAT reforms and administrative efficacy play pivotal roles in addressing the regressive nature of VAT and its consequences for low-income households (Bari et al., 2022). Notably, studies reveal that low-income workers bear a disproportionate burden, with their living standards significantly impacted by factors such as unemployment benefits, reflecting a notable 37% disparity compared to high-income counterparts (Giovanis et al., 2022). Furthermore, the introduction of VAT has been associated with heightened income-based inequality, particularly affecting low-income groups (Qi et al., 2020). The exacerbation of these disparities amid the COVID-19 pandemic underscores the vulnerability of low-skilled and low-income demographics to economic shocks, leading to heightened poverty and unemployment rates (Jiang et al., 2022). It is evident that VAT design and enforcement mechanisms significantly influence its redistributive effects and subsequent impact on the standard of living of low-income individuals (Acosta-Ormaechea & Morozumi, 2021).

The regressive influence of VAT impedes wealth redistribution from the affluent to the less fortunate, thereby exacerbating the living standards of low-income individuals (Mgammal et al., 2023). Reddy (2023) contends that notwithstanding economic challenges, low-income households can sustain consumption and minimum living standards through government benefits and robust social resources like strong kinship networks. This underscores the pivotal role of social support systems in mitigating the adverse effects of VAT on the standard of living of low-income groups. Moreover, Park et al (2023) accentuates the enduring implications of income variability on health outcomes, highlighting that sustained low income is associated with heightened cardiovascular disease risk.

Consumption taxes, notably Value-Added Tax (VAT), are recognized for their regressive nature, disproportionately affecting low-income individuals and potentially precipitating adverse welfare consequences (De Silva et al., 2023). The regressive impact of VAT can exacerbate income disparities and impede the ability of low-income individuals to meet their basic needs and enhance their quality of life. Taxation policies, encompassing the progressivity of income tax and VAT, wield substantial influence in delineating the overall tax burden on diverse income groups and can shape the standard of living of low-income individuals (Delfin-Ortega et al., 2024). Effectively addressing the impact of VAT on the standard of living of low-income individuals necessitates a comprehensive understanding of how tax policies intersect with income inequality and broader socioeconomic factors to ensure that taxation systems do not disproportionately burden those grappling with financial challenges.

However, it is important to note that previous studies also highlight the potential benefits of VAT for middle- and low-income individuals under certain circumstances. For instance, research suggests that VAT revenue can fund social welfare programs and public services that benefit all income groups, including those in the middle and lower-income brackets (Mjaku, 2020). Furthermore, VAT policies may encourage the formalization of the economy, leading to increased job opportunities and economic growth, ultimately benefiting middle- and low-income individuals (Brockmeyer et al., 2024).
The literature examining the impact of VAT on middle and low-income individuals reveals several key findings and notable gaps. Studies indicate that VAT policies can disproportionately burden low-income individuals by increasing the prices of essential goods and services, thereby reducing their purchasing power and exacerbating income inequality (Necula et al., 2022; Obeng, 2018). Middle-income individuals are also affected, experiencing changes in consumption patterns and economic behavior in response to fluctuations in VAT rates or policies (Prasad, 2023). However, VAT revenue generated from middle and low-income individuals contributes to funding social welfare programs and public services, potentially benefiting these income groups indirectly (Mjaku, 2020). Furthermore, VAT policies can incentivize the formalization of the economy, leading to increased job opportunities and economic growth that may benefit middle and low-income individuals (Brockmeyer et al., 2024). Despite these insights, gaps in the literature persist, including limited focus on specific subgroups within middle and low-income populations, insufficient exploration of long-term implications, and a scarcity of empirical studies evaluating the effectiveness of policy interventions aimed at mitigating adverse effects and promoting inclusive growth (Kirkwood et al., 2022). Addressing these gaps through rigorous empirical analysis and interdisciplinary research efforts is crucial for informing evidence-based policy interventions aimed at promoting equity, social justice, and inclusive economic growth.

Methodology

The research used the PRISMA protocol to find relevant papers and conducted a bibliometric analysis to determine global research trends in (value added tax OR VAT) AND (economy OR economic) research. The PRISMA has been used in several studies (Ahmed et al., 2023b; Ahmed et al., 2022b; Alsharif et al., 2022). The study looked at the most productive countries and academic institutions, leading journals in the field, prolific authors, most-cited papers, and occurrences of keywords to assess improvements in publications. This study aims to provide an overview of the current trends to fill the existing gap. Accordingly, four research questions were established to justify the structure and to gain the full view of the existing scientific research in the analyzed domain:

1. Is there and what is the annual growth of scientific publications in the field?
2. What are the most productive a) countries; b) academic institutions; c) journals; and d) authors?
3. What are the most prominent keywords in selected articles?
4. What are the most-cited articles in the field?

Endeavoring to answer the research questions, the current study starts by extracting articles and review articles from the Scopus database in May 2024. The key theme of this study was articles and review articles about "value-Added Tax Impact on Middle and Low-Income Citizens "research; the following search was applied to: the title, abstract, and keywords: TITLE-ABS-KEY ( value AND added AND tax OR vat ) AND ( economy OR economic ) AND ( LIMIT-TO ( SRTYPE , "j" ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "re" ) ) AND ( LIMIT-TO ( PUBYEAR, 2004 ) OR LIMIT-TO ( PUBYEAR, 2005 ) OR LIMIT-TO ( PUBYEAR, 2006 ) OR LIMIT-TO ( PUBYEAR, 2007 ) OR LIMIT-TO ( PUBYEAR, 2008 ) OR LIMIT-TO ( PUBYEAR, 2009 ) OR LIMIT-TO ( PUBYEAR, 2010 ) OR LIMIT-TO ( PUBYEAR, 2011 ) OR LIMIT-TO ( PUBYEAR, 2012 ) OR LIMIT-TO ( PUBYEAR, 2013 ) OR LIMIT-TO ( PUBYEAR, 2014 ) OR LIMIT-TO ( PUBYEAR, 2015 ) OR LIMIT-TO ( PUBYEAR, 2016 ) OR LIMIT-TO ( PUBYEAR, 2017 ) OR LIMIT-TO ( PUBYEAR, 2018 ) OR LIMIT-TO ( PUBYEAR, 2019 ) OR LIMIT-TO ( PUBYEAR, 2020 ) OR LIMIT-TO ( PUBYEAR, 2021 ) OR LIMIT-TO ( PUBYEAR, 2022 ) OR LIMIT-
This study has followed the instruction of Alsharif et al. (2023b) to present a thorough bibliometric analysis detecting and listing the most productive countries, academic institutions, journals, and authors; later on, a brief description of each analyzed parameter is provided. The VOSviewer software was utilized to create visualization maps, which simplifies bibliometric research across various fields, such as value-added tax (Al-Mazroui et al., 2023; Duvendack & Mader, 2020; Sharma & Arora, 2024), marketing (Alsharif et al., 2023c; Pilelienė et al., 2022), ecosystem development (Pilelienė & Jucevičius, 2023), human hormones (Halsharif & Pilelienė, 2023). In particular, VOSviewer has been used in several studies (see Ahmed et al. (2021); Alsharif et al. (2021)) to gain a comprehensive understanding of the development of (value added tax OR VAT) AND (economy OR economic) research.

The procedure used in the study enabled the identification of 481 documents that were published between 2004 and May 2024. The study's authors focused specifically on documents, including articles and reviews between 2004 and May 2024 due to the significant increase in the number of publications during this period. Additionally, only papers written in English were included, as it was the most typically used language in the field. The study aimed to identify as many relevant papers as possible to explore and analyze the global academic trends (e.g., productive countries, institutions, authors, and other relevant factors) related to the (value added tax OR VAT) AND (economy OR economic) research. The selection process for the articles is shown in Figure 1.
Results and Discussions

As a result of the procedure, 481 academic journal papers in (value added tax OR VAT) AND (economy OR economic) research were identified. The analysis revealed a significant growth in publications, with over 50% of the total papers being published between 2019 and May 2024. Figure 2 illustrates the annual publications and citations of publications, with three documents being published in 2004 and the number increasing almost twenty-one times in 2021 before slightly decreasing to almost sixteen times in 2023, and seven times in May 2024. The increasing interest among scholars in the (value added tax OR VAT) AND (economy OR economic) research has led to a rise in the number of publications and citations.
Figure 2. The annual publications and citations between 2004 and May 2024.

A bibliometric analysis
Leading countries and institutions

Table 1 shows the most ten productive countries and academic institutions. The USA has contributed 83 papers since 2004, with the highest total citations (1130). This has been followed by China with 68 papers and 991 total citations. As we can see, four countries (the Czech Republic, the UK, Germany, and Australia) have contributed between 20 and 30 papers related to value-added tax (VAT). While the rest countries (Netherlands, South Africa, Nigeria, and Ukraine) have published less than 20 papers. Furthermore, the number of citations reflects the impact of country, journal, institution, etc. Therefore, the USA is the most influential country in the field based on the number of citations (1130 citations), while Ukraine is the least influential country in the list.

For academic institution, "International Monetary Fund," USA, is the most productive and influential institution, while "National University of Life and Environmental Sciences of Ukraine" is the least productive and influential institution.
Table 1
The most ten productive countries and academic institutions.

<table>
<thead>
<tr>
<th>#</th>
<th>Country</th>
<th>TPs</th>
<th>TCs</th>
<th>The most prolific academic institutions</th>
<th>TPs</th>
<th>TCs</th>
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<tbody>
<tr>
<td>1</td>
<td>USA</td>
<td>83</td>
<td>1130</td>
<td>International Monetary Fund</td>
<td>11</td>
<td>356</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>68</td>
<td>991</td>
<td>Renmin University of China</td>
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<td>26</td>
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<tr>
<td>3</td>
<td>Czech Republic</td>
<td>29</td>
<td>129</td>
<td>VSB – Technical University of Ostrava</td>
<td>7</td>
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<td>4</td>
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<tr>
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<td>Victoria University</td>
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<td>7</td>
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<td>CPB Netherlands Bureau for Economic Policy Analysis</td>
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<td>44</td>
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<td>8</td>
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<td>University of Pretoria</td>
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<td>10</td>
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<td>15</td>
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<td>National University of Life and Environmental Sciences of Ukraine</td>
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<td>8</td>
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</table>

TPs; total publications, TCs; total citations

Most Productive Authors

Table 2 displays the most prolific authors in the (value AND added AND tax OR VAT) AND (economy OR economic) research, with a minimum of three papers. Sixteen authors from twelve different countries. Two authors have produced five papers, and the rest of the authors (fourteen authors) have released three papers. Keen, M. (affiliated with the Université Clermont Auvergne, France) and Omodero, C.O. (affiliated with the Covenant University, Nigeria) are the most productive authors, with five papers. Furthermore, Barth, F. (affiliated with the VAT Manager at Alvarez & Marsal, USA) is the least productive author on the list. In addition, Keen, M. is the most influential author in the list based on the number of citations (316), while Barth, F. is the least influential author.

Table 2
The most productive authors with a minimum of three publications.

<table>
<thead>
<tr>
<th>#</th>
<th>Author's name</th>
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<th>TCs</th>
<th>Affiliation</th>
<th>SC ID</th>
<th>Country</th>
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<td>France</td>
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<td>26</td>
<td>College of International Bussines ISM Slovakia</td>
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<tr>
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</tbody>
</table>
Table 3 shows the journals that have published at least four papers in the (value added tax OR VAT) AND (economy OR economic) research. Two journals have published more than ten papers, twelve journals have published between 5 and 10 papers, and the remaining journals (two journals) have published four papers. "International Tax And Public Finance," (CiteScore 2.4) is the most productive journal with 16 papers and published the second-highest-cited papers. This was followed by the “National Tax Journal,” with 12 papers and 84 citations. Although the "Journal Of Public Economics" (CiteScore 14.1) journal has produced 7 papers, its published papers with the highest number of citations (146 TCs). It has been inferred that the "Journal Of Public Economics" journal is the most influential journal in the relevant field. The 2nd influential journal is the "International Tax And Public Finance," with 138 TCs. The least influential journal is the "EC Tax Review," with two citations. In the end, the least productive journal is "Economic Annals XXI," with four papers and 24 TCs.
Table 3
The most productive journals with a minimum of four publications.

<table>
<thead>
<tr>
<th>#</th>
<th>Source/Journal</th>
<th>TPs</th>
<th>TCs</th>
<th>CS 2023</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>International Tax And Public Finance</td>
<td>16</td>
<td>138</td>
<td>2.4</td>
<td>Springer Nature</td>
</tr>
<tr>
<td>2</td>
<td>National Tax Journal</td>
<td>12</td>
<td>84</td>
<td>3.3</td>
<td>University of Chicago Press</td>
</tr>
<tr>
<td>3</td>
<td>Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis</td>
<td>9</td>
<td>13</td>
<td>1.4</td>
<td>Mendel University of Agriculture and Forestry Brno</td>
</tr>
<tr>
<td>4</td>
<td>Applied Economics</td>
<td>9</td>
<td>82</td>
<td>3.8</td>
<td>Taylor &amp; Francis</td>
</tr>
<tr>
<td>5</td>
<td>Sustainability Switzerland</td>
<td>9</td>
<td>101</td>
<td>6.8</td>
<td>MDPI</td>
</tr>
<tr>
<td>6</td>
<td>Journal Of Public Economics</td>
<td>7</td>
<td>146</td>
<td>14.1</td>
<td>Elsevier</td>
</tr>
<tr>
<td>7</td>
<td>Journal Of Tax Reform</td>
<td>7</td>
<td>12</td>
<td>1.4</td>
<td>Ural Federal University</td>
</tr>
<tr>
<td>8</td>
<td>Public Finance Review</td>
<td>7</td>
<td>45</td>
<td>1.3</td>
<td>SAGE</td>
</tr>
<tr>
<td>9</td>
<td>EC Tax Review</td>
<td>6</td>
<td>2</td>
<td>0.9</td>
<td>Kluwer Law International</td>
</tr>
<tr>
<td>10</td>
<td>Economic Modelling</td>
<td>6</td>
<td>75</td>
<td>7.9</td>
<td>Elsevier</td>
</tr>
<tr>
<td>11</td>
<td>Actual Problems Of Economics</td>
<td>5</td>
<td>10</td>
<td>-</td>
<td>National Academy of Management</td>
</tr>
<tr>
<td>12</td>
<td>China Economic Review</td>
<td>5</td>
<td>83</td>
<td>10.5</td>
<td>Elsevier</td>
</tr>
<tr>
<td>13</td>
<td>Ejournal Of Tax Research</td>
<td>5</td>
<td>13</td>
<td>0.4</td>
<td>University of New South Wales</td>
</tr>
<tr>
<td>14</td>
<td>Intertax</td>
<td>5</td>
<td>5</td>
<td>0.8</td>
<td>Kluwer Law International</td>
</tr>
<tr>
<td>15</td>
<td>Economic Systems Research</td>
<td>4</td>
<td>34</td>
<td>5.6</td>
<td>Taylor &amp; Francis</td>
</tr>
<tr>
<td>16</td>
<td>Economic Annals XXI</td>
<td>4</td>
<td>24</td>
<td>1.5</td>
<td>Institute of Society Transformation</td>
</tr>
</tbody>
</table>

CS; CiteScore, MDPI; Multidisciplinary Digital Publishing Institute

Keywords Analysis
In bibliometric analysis, keyword occurrences provide a quantitative approach to express the strength of links between paired keywords, with a larger number indicating a stronger link (Alsharif et al., 2023a; Alsharif et al., 2023c). This analysis provides a comprehensive explanation of the article's content. The link strength between keywords reflects their frequency in the article, while the total number of links represents the overall number of keyword appearances in the article. The current paper conducted an author keywords co-occurrence analysis using VOSviewer software, which involved 32 author keywords with at least five occurrences. This method is important for presenting general claims about the article's content and assessing trend themes in a particular subject, such as value-added tax (VAT), economics, and so forth. Figure 3 depicts the most frequently authors' keywords.
Figure 3. Map of authors’ keywords with a minimum of five occurrences.

Table 4 provides an overview of the most frequently used author’s keywords that have appeared at least five times in the data. The terms "Value added tax/VAT/ value-added tax" have the highest frequency with 376 times and 304 total link strengths (TLS), followed by the terms "Tax reform/ VAT reform," with 42 frequencies and 34 TLS. We can observe several terms such as “taxation” (23 times and 35 TLS), “Economic growth” (9 times and 17 TLS), “Income tax” (8 times and 16 TLS), “Consumption tax” (6 times and 9 TLS), etc.

Table 4

Top keywords by a minimum of five occurrences.

<table>
<thead>
<tr>
<th>#</th>
<th>Keyword</th>
<th>Occ</th>
<th>TLS</th>
<th>#</th>
<th>Keyword</th>
<th>Occ</th>
<th>TLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value added tax/VAT/ value-added tax</td>
<td>376</td>
<td>304</td>
<td>17</td>
<td>Income tax</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>Tax reform/ VAT reform</td>
<td>42</td>
<td>34</td>
<td>18</td>
<td>Tax gap</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Taxation</td>
<td>23</td>
<td>35</td>
<td>19</td>
<td>Sales tax</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Corporate income tax</td>
<td>12</td>
<td>28</td>
<td>20</td>
<td>Tax system</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Tax evasion</td>
<td>18</td>
<td>28</td>
<td>21</td>
<td>Tax burden</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Tax policy</td>
<td>13</td>
<td>20</td>
<td>22</td>
<td>Consumption tax</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>European union</td>
<td>12</td>
<td>20</td>
<td>23</td>
<td>Goods and services tax</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>Tax revenue</td>
<td>12</td>
<td>17</td>
<td>24</td>
<td>Tax administration</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Fiscal policy</td>
<td>11</td>
<td>16</td>
<td>25</td>
<td>Financial services</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Personal income tax</td>
<td>10</td>
<td>25</td>
<td>26</td>
<td>Tax incentive</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>
Citations Analysis

Analyzing citations is crucial for gaining insights into global trends in a specific research field, such as value-added tax (VAT), as it provides valuable information about the most frequently cited documents between 2004 and May 2024 (Ahmed et al., 2022a; Halsharif et al., 2020). This information can be used by future researchers or practitioners to identify impactful articles. In this study, we analyzed a total of 481 papers and identified the most frequently cited documents, with over 50 TCs. Table 5 shows that five papers had over 100 TCs, and the document titled "Firm investment and exporting: Evidence from China's value-added tax reform," was published by the "Journal of International Economics" journal was the most cited article with 202 TCs. The 2nd most cited document was "The value added tax: Its causes and consequences," published by the "Journal of Development Economics" journal, with 183 TCs. The 3rd paper was "Firm R&D, innovation and easing financial constraints in China: Does corporate tax reform matter?" published in the "Research Policy" journal, with 144 TCs. 4th paper was "Can value-added tax incentives of new energy industry increase firm's profitability? Evidence from financial data of China's listed companies," published in the "Energy Economics" journal, with 105 TCs. The 5th paper "Fiscal devaluations," was published in "Review of Economic Studies" journal, with 101 TCs. In addition, the rest of the papers have less than 100 TCs.

For the influential paper, the paper’s title "Firm investment and exporting: Evidence from China's value-added tax reform" is the most influential paper, while "Quantifying environmental externalities with a view to internalizing them in the price of products, using different monetization models" is the least influential paper.

Table 5
The top ten cited documents

<table>
<thead>
<tr>
<th>#</th>
<th>Paper</th>
<th>Year</th>
<th>Journal</th>
<th>ToA</th>
<th>TCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Can value-added tax incentives of new energy industry increase firm's profitability? Evidence from financial data of China's listed companies</td>
<td>2020</td>
<td>Energy Economics</td>
<td>Open Access</td>
<td>105</td>
</tr>
</tbody>
</table>
ToA; type of access

<table>
<thead>
<tr>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical implications, particularly in the realms of redistribution theory and consumer behavior theory. From a redistribution perspective, VAT’s regressive nature underscores the challenge of maintaining fairness and equity in tax systems. The disproportionate burden on lower-income individuals aligns with theories of distributive justice, prompting policymakers to reassess the fairness of taxation policies in redistributing wealth within society. Additionally, insights into consumer behavior shed light on how VAT influences consumption patterns and purchasing power across income brackets. Understanding these dynamics is crucial for crafting tax policies that promote economic welfare while mitigating adverse effects on vulnerable populations.</td>
</tr>
<tr>
<td>Practically, the findings regarding VAT’s impact on the standard of living necessitate careful consideration in tax policy design and social welfare programs. Policymakers must address VAT’s regressive tendencies by implementing adjustments such as targeted relief measures or exemptions for essential goods and services. Such measures aim to mitigate the disproportionate burden on low-income households while ensuring sufficient revenue generation for government programs. Moreover, insights from VAT research inform the design and expansion of social welfare programs to provide essential support to vulnerable populations. Strengthening social safety nets, including income support, healthcare subsidies, and housing assistance, can alleviate the adverse effects of VAT on those most affected, thereby enhancing social protection mechanisms and overall well-being.</td>
</tr>
</tbody>
</table>
| Socially, VAT’s impact on the standard of living intersects with broader issues such as income inequality and access to essential services. Failure to address VAT’s regressive nature may perpetuate disparities in wealth and living standards, leading to social unrest and diminished social cohesion. To address these implications, policymakers must adopt a comprehensive approach that prioritizes equitable taxation policies and targeted support for marginalized communities. Additionally, ensuring universal access to essential services regardless of income level is crucial for promoting social inclusion and equal opportunities for
Conclusion

The impact of VAT on the standard of living of middle and low-income citizens is a multifaceted issue that warrants careful consideration from policymakers, economists, and society at large. Numerous studies have highlighted both positive and negative effects of VAT implementation on individuals belonging to these income brackets. On one hand, proponents argue that VAT can generate significant revenue for governments, which can be channeled into social welfare programs and infrastructure development, potentially benefiting citizens across all income levels. However, on the other hand, VAT is often considered regressive, disproportionately burdening lower-income individuals who spend a larger proportion of their income on essential goods and services subject to VAT. This regressive nature of VAT can exacerbate income inequality and contribute to a decline in the standard of living for those already struggling to make ends meet.

Furthermore, the impact of VAT on consumption patterns, employment, and overall economic growth cannot be overlooked. Studies suggest that while VAT may lead to short-term adjustments in consumer behavior and production decisions, its long-term effects on economic outcomes are subject to various contextual factors, including the structure of the tax system, enforcement mechanisms, and government spending priorities. Therefore, achieving a balance between revenue generation and ensuring equitable distribution of the tax burden is essential in mitigating the adverse impact of VAT on the standard of living of middle and low-income citizens. Policymakers need to carefully design and implement VAT policies that minimize negative repercussions on vulnerable segments of society while fostering sustainable economic development and social progress.

Limitations and Future Directions

The objective of the study was to mitigate methodological constraints within the research framework, although certain limitations were encountered, prompting suggestions for future investigations. The research exclusively concentrated on articles and critiques disseminated in English-language periodicals spanning from 2004 to May 2024, as cataloged in the Scopus database. However, this approach omitted other scholarly outputs such as...
conference proceedings, book sections, concise surveys, editorial pieces, monographs, and brief communications, potentially introducing bias into the analysis. To redress this limitation, the authors advocate for the inclusion of diverse document types to enhance the study’s reliability and diminish biases. In sum, the study furnishes a comprehensive synopsis of the global scholarly discourse surrounding research on the VAT and its economic implications from 2004 to May 2024, as inferred from the reviewed literature.

Acknowledgments
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References


Giovanis, E., Ozdamar, O., & Özdaş, B. (2022). The effect of unemployment benefits on health and living standards in Turkey: Evidence from structural equation modelling and


