



Review Article

Tobacco Tax Policy and Its Impact on Health Finance in Different Countries: A Systematic Review

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Abstract

The consumption of detrimental products, such as cigarettes, has a significant impact on health financing. Smoking is a detrimental practice that has negative effects on health, and the medical expenses linked to smoking-related ailments are considerable. In response, many countries have established cigarette excise laws with the aim of mitigating the adverse effects of smoking on public health and health financing. The implementation of cigarette excise taxes has resulted in a notable reduction in cigarette consumption, an increase in government revenue, and the funding of health programmes. This study aimed to enhance the understanding of the role of tobacco excise laws in promoting sustainable health financing. This study involved the review of 8 papers, and it was conducted following the guidelines of PRISMA-P, 2015 for systematic reviews. A comprehensive literature search was conducted utilizing multiple databases, including PubMed, EBSCO, and ScienceDirect. The tobacco excise management policy has generally aligned with its intended objectives. However, certain aspects, such as reducing consumption, allocation amounts, tariff patterns, and burdens, have yet to be fully effective. Therefore, it is necessary to implement strategic measures to enhance adequacy, such as increasing the pattern of excise tariffs and allocations and ensuring accountability and transparency in implementation.

Keywords: Tobacco Tax, Health Program, Health Financing, Smokers

INTRODUCTION

The field of public health has consistently attracted considerable attention from governments, health organisations and the general public on a global scale. The attainment of optimal health not only has a beneficial impact on individuals but also on the economic viability of a nation. The issue of health financing represents a significant obstacle in numerous countries, and it is therefore essential to address this issue in order to provide universal access to high-quality healthcare services.

One of the most important cash crops is still tobacco, which is processed further to make cigarettes (Audrine, 2020). Cigarettes are the predominant tobacco product, highly desired by a staggering 1.1 billion users globally. However, the consumption of detrimental products, such as cigarettes, significantly influences health financing. Estimates indicate that smoking tobacco use was responsible for almost 6 million deaths in low and middle-income countries (LMICs) in 2019. Approximately 80% of all fatalities caused by smoking tobacco

use took place in low- and middle-income countries (LMICs) (Wiseman et al., 2018). Smoking is a deleterious practice that has adverse effects on health, and the medical expenses linked to smoking-related ailments are exorbitant. Furthermore, smoking is a significant factor in elevated death rates, impacting both economic productivity and individuals' quality of life.

The cultivation of tobacco persists as a dominant cash crop in numerous low- and middle-income countries, despite the evidence indicating that it is not as lucrative as the industry purports and is detrimental to public health and the environment (Appau et al., 2019). Tobacco use is the most significant preventable risk factor for most major non-communicable diseases (Reitsma et al., 2017). Many countries have established cigarette excise laws to mitigate the adverse effects of smoking on public health and health financing. Tobacco taxation, who is transferred to consumers through increased cigarette prices, is widely acknowledged as a highly successful population-based approach to reduce smoking and its negative health effects (Bader et al., 2011). Cigarette excise taxes have significantly diminished cigarette consumption, augmented government revenue, and funded health programs (Purnamasari et al., 2019). Nevertheless, the influence of cigarette excise policy on health financing and smoking behavior continues to be a pertinent and captivating subject of study.

Tobacco taxes have traditionally been regarded as a means of generation of income for governments. However, as the level of evidence regarding the detrimental effects of tobacco has grown over time, the popular opinion has gone through a transformation. Increasingly, governments and the general public acknowledge that tobacco taxation serves as both a source of income and a successful public health measure to decrease tobacco use and its related negative effects (WHO, 2021).

This study investigated the correlation between tobacco excise policy, cigarette usage, and health financing. Using a systematic literature review, we would explore how well tobacco excise policies reduce cigarette consumption and how they affect health financing. This study aimed to offer an enhanced understanding of the role of tobacco excise laws in promoting sustainable health financing. Additionally, it seeks to provide valuable recommendations to policymakers in addressing the public health issues associated with smoking.

To gain insight into the connection between cigarette taxes and funding for healthcare, we can enhance our comprehension of how fiscal policies contribute to public health promotion and alleviate the financial strain on healthcare systems. This research can serve as a foundation for additional discussions regarding the efficacy of anti-smoking programs and potential interventions to enhance public health outcomes.

Therefore, this publication significantly contributes to enhancing comprehension of the impact of cigarette excise on health financing and identifying policy approaches that can improve public health while upholding the nation's economic stability.

METHODS

This systematic review study was guided by Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 (Moher et al., 2015). The initial stage was a literature search using several databases, namely PubMed, EBSCO, and ScienceDirect. Keywords in English used to search the database Country, Tobacco Tax, Policy, and Health Financing published between 2013 and 2023, selected based on English-only publications, full text, and selected journals based on relevance and feasibility assessment.

Inclusion criteria for appropriate documents were dissertations/papers, journals, conference proceedings, and all forms of documents that were available (unpaid) and had been published in the scientific areas of public health, health economics, and medicine. Exclusion

criteria were articles in languages other than English, published before 2013, published by different populations and interventions, and paid articles.

The documents included in this article were selected from four article search engines and subsequently evaluated using the PICO formula comprising keywords:

- P (Population) : Country
- I (Intervention) : Tobacco Tax Policy
- C (Comparison) : None
- O (Outcome) : Health Financing

Table 1. Inclusion and Exclusion Criteria

Criteria (PICO)	Inclusion	Exclusion
<i>Population</i>	A Country (Country)	Apart from a country, global compares two or more countries
<i>Intervention</i>	Tobacco Tax Policy	Apart from implementing cigarette excise, for example, discussing alcohol excise or combining alcohol excise and cigarette excise
<i>Comparators</i>	None	None
<i>Outcomes</i>	Discussing the Health Budget Allocation of cigarette excise	It does not discuss the health budget allocation from cigarette excise
<i>Study Design and publication type</i>	Meta-analysis, Quasi-experimental studies, randomized control and trial, and cross-sectional studies, case study	Systematic review
<i>Publication years</i>	After 2013	Before 2013
<i>Language</i>	English	Doesn't use English

The articles that met the inclusion criteria were collected and examined systematically through a screening process that included the title, abstract, year of publication, and articles with full text. The author then conducted a feasibility test in accordance with the inclusion criteria that had been established. The subsequent step was for the author to critically appraise the selected articles to assess their quality and suitability using the CEBMa Tool, with the aim of obtaining eight articles that were suitable for synthesis.

The article selection process consists of 4 steps, displayed using the flow diagram in Figure 1.

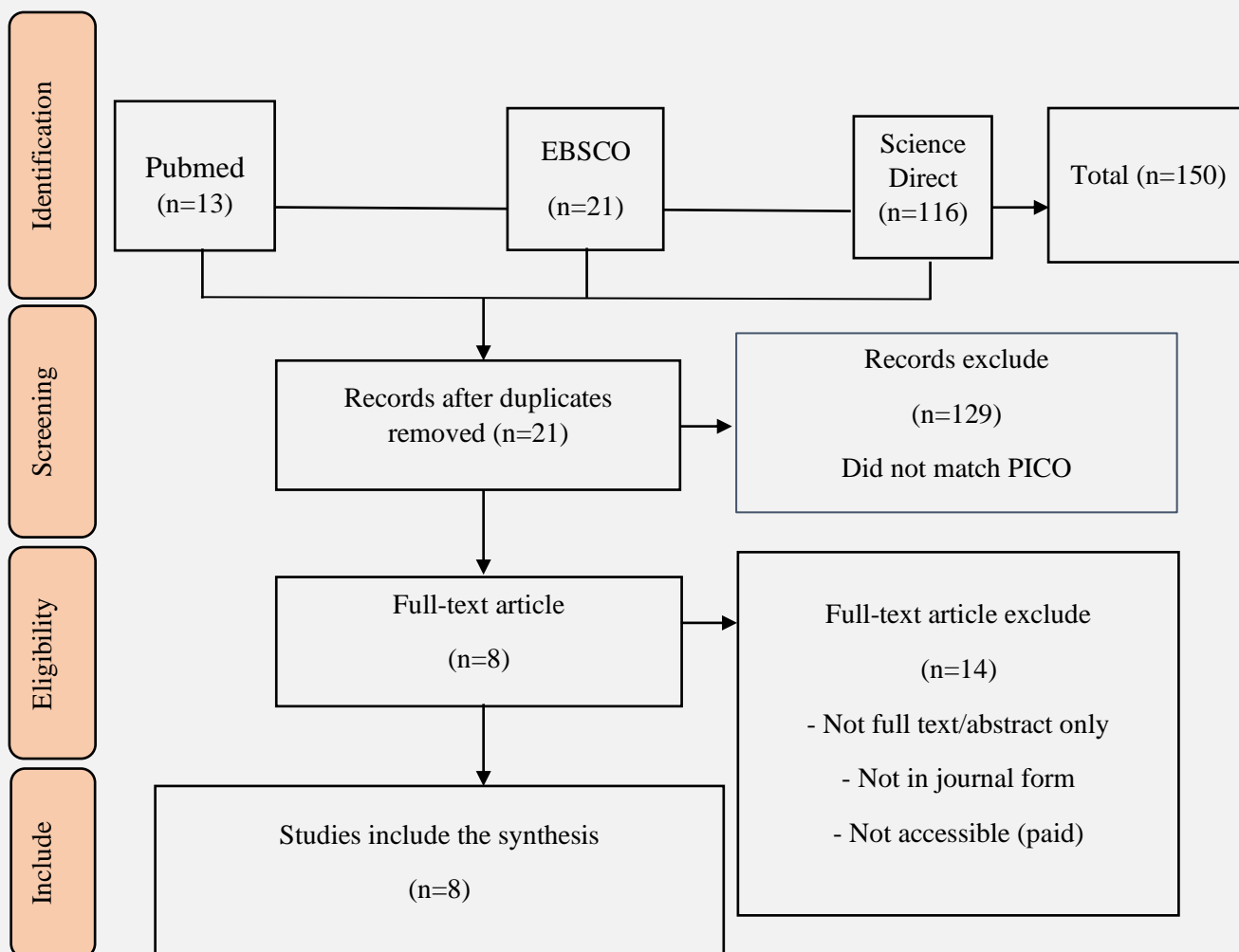


Figure 1. Prisma Flow Diagram

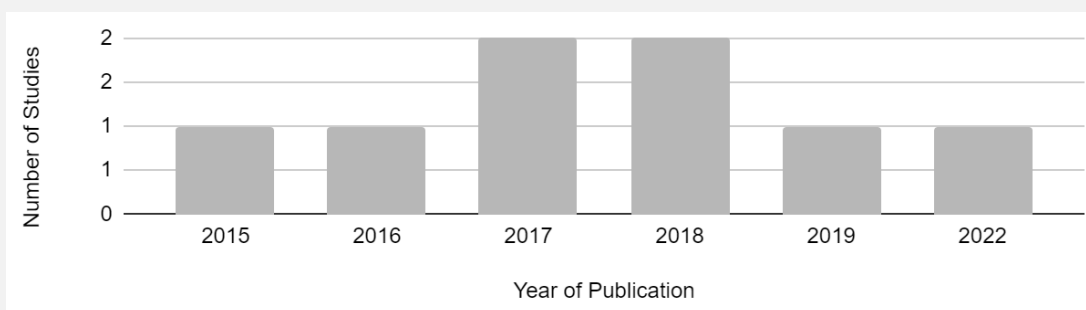


Figure 2. The number of studies by year of publication

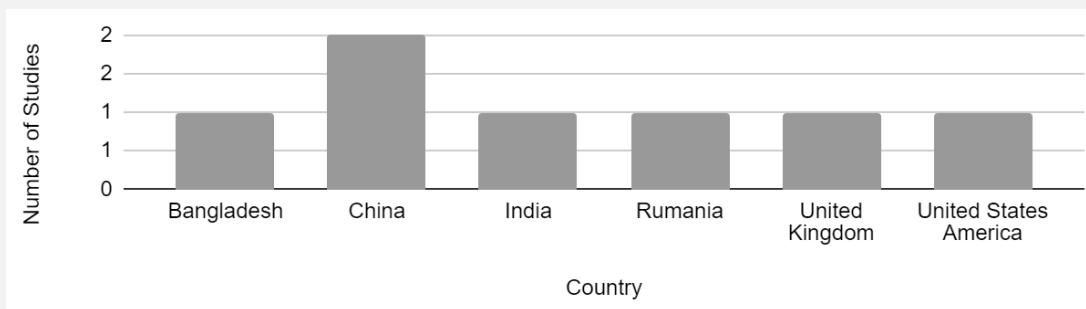


Figure 3. The number of included articles by the country of studies

RESULT

Based on the results of article screening and determination of eligibility criteria, original Research articles that met the inclusion criteria for review were obtained. The features of the eight selected studies and journals published in the last ten years were used in this study (2013-2023). Among the studies were reviewed for 2015, 2017, 2018, 2019, and 2022. The earliest research was released in 2015, and the most current research was in 2022. Two studies were carried out in China, and the other studies were carried out in the UK, India, Romania, Bangladesh, and the USA. Two studies used the CEA (cost-effectiveness analysis) method, two used CBA (cost-benefit analysis), and the rest used qualitative studies. The study results are in the extraction table attached to Table 2 below.

Table 2. Data Extraction

No.	Author/year	Title of research	Research Objectives	Research method	Result	Conclusion
1	Hilton, Shona, et al., 2017 PubMed	Experts' views on how to design a tobacco control fund in the UK	To examine experts' opinions regarding the possible benefits and strategies for creating and overseeing a tobacco control fund in the United Kingdom.	Semi-structured interviews and follow-up discussion groups. The research Subjects were Twenty-four UK and international experts in tobacco control regulation, public health, economics, or law from academia, public, private, and third sectors – Qualitative Study.	<p>Tobacco control fund</p> <p>The research informants widely concurred that establishing a tobacco control fund might serve as a valuable means of generating consistent and dependable cash directly from the tobacco business.</p> <p>It is regarded as a means to enhance public health endeavors. Allocating more funds toward Public Health and tobacco control measures would be more advantageous from a Public Health standpoint.</p> <p>Informants appreciated the fact that financial contributions from the tobacco industry hold the industry accountable for the harm it does.</p> <p>The Tobacco Control Fund can be established through the accumulation of cash sourced from:</p> <ol style="list-style-type: none"> Excise duty imposed on the sale of tobacco products at retail. <p>The research informants expressed their support for the excise tax due to its dual function of generating revenue and curbing cigarette usage. This strategy is seen as straightforward, efficient, and politically well-received, which has several advantages. Nevertheless, there were uncertainties over the excise tax's efficacy in generating funds. One suggestion is that the government effectively controls how taxes are transferred to consumers by limiting retail prices. This means that by raising specific excise taxes, the government can generate more revenue while ensuring that retail prices remain stable, thereby preventing consumers from incurring additional costs.</p> <ol style="list-style-type: none"> A segregated and dedicated excise tax. <p>This word refers to the concept that the income generated by this tax is segregated or legally distinct from other sources of government revenue. The revenue generated from this tax is restricted to its designated purpose and cannot be allocated for general government expenditures. These levies are linked to distinct objectives or designated programs within this particular context. Conversely, tax earnings are directed towards the overall government fund and are allocated for diverse objectives. Implementing this tax aims to guarantee that the funds generated from it are exclusively allocated to support designated programs or initiatives, thus enhancing transparency in fund utilization and establishing a direct connection between tax revenue and the advantages received by a specific community or sector.</p> <p>It is possible to allocate a portion or all of the excise tax on retail tobacco sales to a specific fund instead of the general government funds. Nevertheless, there would be obstacles in garnering</p>	<p>Allocating tobacco control money will facilitate the achievement of the government's intended tobacco-free objectives. Nevertheless, there is no universally applicable template for such a fund. The design and functioning of such a fund would require customization to align with various countries' cultural governmental philosophies and social circumstances. Experts endorse the implementation of tobacco control funds to address health disparities and meet the objectives of England and Scotland in reducing adult smoking rates to 5% by 2030 and 2034, respectively. The study offers preliminary insights into establishing and managing a fund in the UK, specifically focusing on establishing a policy for a tobacco control fund. It outlines the fundamental ideas that should be employed in this process. Crucially, although there is no unanimous support for any funding method, experts concur that having an "imperfect policy" is preferable to guarantee dedicated funding rather than postponing action or doing nothing.</p>

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					<p>political backing for the program, particularly about the autonomy to allocate cigarette excise funds.</p> <p>3. Imposition of a levy on the cigarette sector Most respondents endorsed this strategy, perceiving it primarily as a means to generate revenue from the industry rather than from consumers. It could be more attractive to the public and beneficial to policymakers than an excise tax. Regulating retail prices is crucial to ensure that the burden of levy expenses falls on the industry, as cigarette businesses tend to monopolize the market and generate excessive profits by raising prices in response to excise tax hikes. Excise increases are leveraged as a means to capitalize on addicted consumers who are still actively participating in the market by raising costs. Nevertheless, the price increase has a positive aspect as it proves highly efficient in deterring the onset of new smokers.</p> <p>4. Additional factors to consider when designing policies</p> <p>The administration of the tobacco excise fund should be entrusted to a governmental entity, accompanied by an autonomous advisory panel, to guarantee transparent decision-making that garners trust from the industry, researchers, academics, and the government. The fund is allocated annually and distributed at local, regional, and national levels to assist programs to prevent and stop smoking, explicitly focusing on prevention and cessation rather than treatment.</p>	
2	Bahera, D. K et.al, 2022 PubMed	Exploring the possible sources of fiscal Space for health in India: insights from political regimes	This study explores potential sources of fiscal space for healthcare in India during different political regimes.	This study employs a descriptive methodology to examine the level of political dedication to advancing the health sector. It achieves this by predicting the trajectory of fiscal space indicators under different political regimes from 1998-1999 to 2021-2022, utilizing a regression model incorporating dummy variables.	We have identified four potential means of creating fiscal room for health: (1) enhancing the mobilization of domestic resources, (2) implementing alternative methods of revenue collection, (3) prioritizing health through spending management, and (4) optimizing the utilization of central transfers. Alternative revenue mobilization channels for fiscal space for health can include measures such as goods and services tax reforms, special taxes for health, increased excise taxes on tobacco products, gas subsidies for the poor, tax administration reforms, and direct benefit transfers from health services.	This study demonstrates that the central government is politically dedicated to enhancing revenue through various fiscal policy initiatives. While health has been given priority during this period, there is less evidence of political commitment to increase the proportion of health spending in the overall budget allocation. Despite a slowdown in economic growth in India, the health budget has been prioritized over the past two years due to the COVID-19 pandemic. This study aims to produce a policy paper that analyses fiscal space from a political economy perspective. The function of the finance ministry will be evaluated using

No.	Author/year	Title of research	Research Objectives	Research method	Result	Conclusion
3	Verguet, S. et al, 2017 EBSCO	Distributional benefits of tobacco tax and smoke-free workplaces in China: A modeling study	The objective is to analyze the impact on the distribution of wealth in China resulting from raising the price of tobacco goods through excise tax hikes and adopting smoke-free workplaces.	This study utilizes an extended cost-effectiveness analysis (ECEA) to assess the impact of a 75% increase in cigarette prices, achieved through a significant rise in excise taxes that are fully transferred to consumers and the implementation a comprehensive workplace smoking ban nationwide. The evaluation focuses on preventable premature deaths, changes in tax revenues, and the financial risk protection gained by different income groups within the male population, who constitute the majority of Chinese smokers. Financial risk protection refers to the prevention of poverty cases, measured by the number of individuals who would no longer face out-of-pocket expenses for tobacco-related illness treatment, thus avoiding impoverishment.	Implementing a 75% hike in cigarette prices in China would result in approximately 24 million premature deaths being averted among the current male population. Of these, one-third would be from the lowest income groups. Additionally, this measure would generate an extra US \$46 billion in annual tax revenues and prevent around 9 million instances of poverty, with 19% of these cases occurring in the lowest-income groups. Enforcing a workplace smoking ban would avert approximately 12 million premature deaths, with 20% of them affecting individuals in the lowest income brackets. Additionally, it would decrease annual tax revenues by US \$7 billion and prevent an estimated 4 million instances of poverty, with 12% affecting individuals in the lowest income groups.	administrative data and documents. Implementing higher excise taxes on tobacco products and enforcing a workplace smoking ban in China could yield significant health and economic advantages, particularly for the impoverished segments of the population.
4	Ciobanu, M. Et al, 2018	Variation across Romania in the health impact of increasing tobacco taxation	The objective of this study is to analyze the regional disparities in the effects of tobacco tax hikes between 2009 and 2011 on the prevalence of seven smoking-related disorders among the adult population in Romania. The aim is to determine whether regions more susceptible to cigarette smuggling due to their proximity to neighboring countries experience a lesser impact from these price increases.	An analytical approach utilizing a pragmatic natural experiment design was employed to examine the time frame from 2009 to 2015. The findings from hospital episode data about diseases caused by smoking were analyzed. The analysis focused on six regional subgroups, which were compared to other nations based on their border features.	Nationally, the prevalence of smoking-related diseases declined during the research period, particularly in the years after the tax increase. Notably, asthma exhibited the most substantial reduction. Only asthma showed a notable decline when examining individual diseases throughout the specified time frame. This could be attributed to the temporal disparity between the decrease in cigarette consumption and the subsequent effects on particular ailments. As an illustration, the impact on hospitalizations linked to asthma is anticipated to manifest more quickly compared to hospitalizations connected to cancer, as the amelioration of respiratory symptoms typically begins soon after quitting smoking. Nevertheless, all diseases other than cancer exhibited an overall decrease, and, except for Chronic Obstructive Pulmonary Disease (COPD), a more pronounced decrease linked to the years of intervention. When examining the sub-national level, there was no evident association between the border features of the six sub-groups and the indicators of the impact on smoking-related diseases. There are several possible reasons for this: the increase in smuggling of cheaper cigarettes may not have been as significant as suggested by the tobacco industry study; smuggled cigarettes may have	The tax increase was strongly correlated with a significant decrease in hospitalizations for smoking-related illnesses. Additionally, there was no evidence of a connection between the tax increase and an increased risk of smuggling at the regional level, as indicated by the lack of variance in this impact size among neighboring regions. Romania should adopt a more thorough and forward-thinking approach to tobacco control by the guidelines set forth by the World Health Organization's Framework Convention for Tobacco Control.

No.	Author/year	Title of research	Research Objectives	Research method	Result	Conclusion
					been distributed more evenly throughout Romania; smuggled cigarettes may have been sent to other EU member states instead of being sold in Romania; or changes in smuggling may not have had a noticeable impact on tobacco consumption at the local level. International data supports the claim that tobacco tax increases do not lead to significant increases in illegal commerce.	
5	Nargis, N. et al, 2019 EBSCO	A decade of cigarette taxation in Bangladesh: lessons learned for tobacco control	Analyze the reasons behind the ineffectiveness of cigarette tariffs in curbing cigarette smoking in Bangladesh.	By utilizing government data spanning from 2006 to 2017, the study established a correlation between patterns in cigarette sales that were subject to taxation and the structure of the cigarette excise tax. Additionally, the study examined the impact of changes in cigarette taxes and prices on these trends. The study utilized smoking prevalence data from the Bangladesh Global Adult Tobacco Survey to examine the usage of different tobacco products in the years 2009 and 2017. The study analyzed demand and supply dynamics in the cigarette market using yearly reports from tobacco manufacturers and other relevant literature.	In addition to increasing affordability, three factors appear to have weakened the effectiveness of tax and price increases in reducing cigarette consumption in Bangladesh. First, the graduated excise tax structure widens price differentials between brands and encourages downward substitution by smokers from higher-priced to lower-priced cigarettes. Second, income growth and shifts in smokers' preferences towards better quality products encourage upward substitution from hand-rolled clove cigarettes (SKT) to lower-priced machine-made clove cigarettes (SKM). Third, the tobacco industry's market expansion and differential pricing strategies change relative prices so that lower-priced cigarettes remain cheap. High tax shares alone may prove inadequate as a barometer of effective tobacco taxation in lower-middle-income countries, mainly where tobacco tax structures are complex, tobacco product prices are relatively low, and the affordability of tobacco products is increasing.	More than high tax shares alone may prove inadequate as a barometer of effective tobacco taxation in low-income countries, mainly where tobacco tax structures are complex, tobacco product prices are relatively low, and the affordability of tobacco products is increasing. A simple and uniform tobacco tax structure, indexed to inflation and income growth, is a prerequisite for tobacco taxes and price increases to reduce tobacco product consumption effectively.
6	Vuolo, M, Et al, 2016 EBSCO	Independent and Interactive Effects of Smoking Bans and Tobacco Taxes on a Cohort of US Young Adults	We examine the reciprocal effects of smoking bans and taxes on cigarettes among a longitudinal cohort of young adults.	This study utilizes a collection of US tobacco policies at both the state and local levels, along with the nationally representative 1997 National Longitudinal Survey of Youth (2004-2011) data, covering individuals aged 19 to 31 years. Additionally, Census data is incorporated to investigate the influence of tobacco policies on the consumption of both current and daily packs of cigarettes. The analytical sample comprised 19,668 observations from 4,341 individuals residing in 487 cities.	Significant effects were observed for a total smoking ban among current smokers. However, no effects were identified for an excise tax. Regarding daily smoking, we saw notable impacts of taxes, but the evidence supporting prohibitions was weak.	Smoking bans are often effective in discouraging social smoking among young adults, while excise taxes only discourage smoking when there are no prohibitions in place. The charge mainly deters heavy smokers. While both policies do influence smoking behavior in young adults, their coexistence does not enhance the efficacy of any program.
7	Shang <i>et al.</i> , 2018 Science Direct	Country-Specific Costs of Implementing The WHO FCTC Tobacco	The objective is to revise and model country-specific metrics that are particularly pertinent to the expenses, funding	Secondary data analysis mainly uses 2016 data or 2014 ± 15 data. Policy cost-benefit analysis and economic analysis of excise taxes on addictive goods such as tobacco have been considered an important source of government tax	Smoking continued to be a significant contributor to premature mortality globally in 2016, even though the adoption of effective tobacco control measures fell short of the necessary standards. There is potential to raise cigarette taxes and pricing further, as cigarettes remain reasonably priced in numerous countries. The cost of implementing best purchase rules over the next 15 years amounted to only 8.3% of the excise revenue in 2016. This	Imposing higher tariffs can effectively reduce tobacco consumption by supporting the enforcement of the WHO FCTC.

No.	Author/year	Title of research	Research Objectives	Research method	Result	Conclusion
		Control Policies And Potential Financing Sources	sources, and execution of finance policies related to the Framework Convention of Tobacco Control (FCTC). When insufficient money poses a significant barrier to the advancement of FCTC policies, it is crucial to demonstrate how higher excise taxes could serve as a potential funding source. This should be accompanied by a comprehensive analysis of the primary expenses and advantages of implementing FCTC policies.	revenue since the publication of the Wealth of Nations.	suggests that a relatively modest portion of the annual tax revenue might cover the expenses associated with implementing tobacco control measures proposed by the WHO FCTC.	
8	Verguet et al., 2015 Science Direct	The Consequences of Tobacco Tax on Household Health and Finances in Rich and Poor Smokers In China: An Extended Cost-Effectiveness Analysis	Modeling the distributional consequences (across income quintiles) in China of a 50% increase in tobacco prices through excise taxes regarding the additional health benefits of tax revenue gained from excise taxes, the net financial consequences for households, and the financial risk protection provided to families. Provided to households.	The cost-effectiveness analysis approach calculates the advantages and financial risk protection households would receive from a 50% rise in tobacco costs, considering different income quintiles. Tobacco users bear the full burden of excise taxes. The vast majority of individuals in China engage in smoking.	The modeling analysis demonstrates that implementing a 50% rise in tobacco prices via excise taxes would lead to a gain of 231 million life years (with a 95% uncertainty range of 194-268 million) over 50 years. Among these gains, one-third would be experienced by individuals in the lowest income quintile. Additionally, this price increase would generate an additional US \$703 billion (\$616-781 billion) in tax revenue from excise taxes. Notably, 14% of this revenue would come from the lowest income quintile, while 24% would come from the highest income quintile. Implementing the excise tax would result in a net increase of \$376 billion (IDR 4.5 trillion) in total household expenditure on tobacco. However, it would lead to a decrease of \$21 billion (-\$83 to \$5 billion) in spending on tobacco among the lowest-income group. Additionally, the tax would reduce spending on tobacco-related diseases by \$24-0 billion (\$17-3-26-3 billion), with 28% of this benefitting the lowest income quintile. Ultimately, it would yield financial advantages.	Implementing higher cigarette taxes can serve as an effective policy tool that benefits low-income households in China by improving their health and financial well-being.

DISCUSSIONS

This study has emphasized the effectiveness of tax-induced price increases to curb tobacco consumption and their subsequent positive impact on public health and finances. According to Article 1, tobacco products are subject to excise taxes because they have a negative effect on health, thereby requiring measures for protection and regulation. Hence, it is imperative to design a systematic excise tariff framework and its distribution for the healthcare industry. The excise tax is levied on the industrial sector to hold them accountable for the health consequences they cause. Establishing a dedicated organization for its administration is imperative to enhance the efficiency, accountability, and transparency of excise tax management. The state must allocate the funds generated from the excise tax to all regions, focusing on prioritizing health improvement and disease prevention (Hilton et al., 2022).

Furthermore, Article 2 specifies the importance of highlighting political dedication by incorporating it into excise regulations. This will ensure that its execution can be monitored, and the revenue generated from excise should be subjected to a significantly high tariff structure for the health sector. Additionally, allocating this revenue to different regions should be considered (Behera et al., 2022).

Based on Article 3, effectively and explicitly managing tobacco excise significantly affects public health and economic and social aspects. However, the tobacco exercise aims to fund healthcare services and support patients' healing, treatment, and recovery through the health insurance program. Furthermore, implementing a substantial cigarette excise duty aligns with the detrimental health effects it can induce (Verguet et al., 2017). Reduced morbidity and mortality resulting from both smoking and exposure to second-hand smoke directly impact health systems by reducing healthcare utilization and, consequently, reducing costs (Chang et al., 2021). The research conducted in Colombia has demonstrated that the health system in the country exhibits certain features that result in the majority of healthcare expenses attributed to smoking being borne by the national risk pool. Consequently, only a small fraction of these costs are directly borne by individuals or households, namely through out-of-pocket expenditure (Maldonado et al., 2022).

Article number 4 elucidates that implementing an excise tax on tobacco products leads to a reduction in tobacco consumption and related diseases. Conversely, it reveals that the prevalence of illegal cigarettes does not contribute to an increase in tobacco consumption or associated diseases. Furthermore, the article demonstrates that raising the excise tax on tobacco products does not increase the circulation of illegal cigarettes (Ciobanu et al., 2018).

Article 5 elaborates on a different point, namely that a high excise tax on tobacco products is not very effective in reducing its consumption, which is due to the shift of tobacco product consumption from high to lower prices, increased welfare/finance, increased tobacco product markets, and variable pricing, including inadequate excise tax management (Nargis et al., 2019). There is a consensus among policymakers that raising tobacco taxes reduces cigarette consumption. However, evidence from Kaestner (2014) stated the evidence supporting the notion that tobacco taxes decrease adult smoking is rather limited. Drawing on data from the Current Population Survey Tobacco Use Supplements, this study specifically examines recent and substantial tax changes. These changes offer the most suitable opportunity to empirically observe a response in cigarette consumption. To estimate the relationship between tax increases and cigarette consumption, a unique paired difference-in-differences approach was employed. Estimates indicate that, among adults, the association between cigarette taxes and either the participation in smoking or the intensity of smoking is negative, minimal, and normally lacks statistical significance (Kaestner, 2014).

However, a different thing is explained in Article 6, namely that the tobacco excise policy resulted in a significant decrease in daily consumption (Vuolo et al., 2016). Regarding the selection of control variables, this paper draws on previous research literature (Zhang & Zheng, 2020). The primary results of this study validated that the upward adjustment in the cigarette excise tax had a substantial adverse effect on the habitual drinking habits of smokers. Results from regression analysis using the PSM-DID approach indicated that smokers were twice as likely as non-smokers to see a reduction in their habitual smoking as a result of the cigarette excise tax (Ferrer et al., 2018).

Meanwhile, Article 7 emphasizes that the allocation of excise tax on tobacco products has yet to be in line with the consequences. Hence, increasing the excise tax is necessary to achieve the policy objectives more effectively (Shang et al., 2018). As in the other Articles, Article 8 underlines the increase in tobacco excise tax that has provided financial benefits through the excise policy objectives and improved public finances/welfare (Verguet et al., 2015).

CONCLUSIONS

Prior research had emphasized the effectiveness of tax-induced price increases to curb tobacco consumption and their subsequent positive impact on public health and finances. Notwithstanding, regional socioeconomic and cultural variations may produce divergent results. The tobacco excise management policy has been based on the policy's objectives. However, in some aspects, such as reducing consumption, the amount of allocation, tariff patterns, and burdens have not been fully considered adequate, so it is necessary to take some strategic steps to be more acceptable in the form of increasing the pattern of excise tariffs and allocations, accountable and transparent in its implementation.

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