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Optimization of tobacco excise revenue sharing funds utilization by employing structural equation model - Partial least square approach

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Abstract

This study aims to optimize the utilization of Tobacco Excise Revenue Sharing Fund (DBH CHT) in Indonesia by employing the Structural Equation Model (SEM) - Partial Least Square (PLS) approach. The research focuses on enhancing the regulatory framework under Regulation of The Ministry of Finance Number 72/2024 by exploring three key hypotheses: (1) utilization of Tobacco Excise Revenue Sharing Fund (DBH CHT) in alignment with National Strategic Projects (PSN), (2) collaboration with private sectors through Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes, and (3) intervention by the Ministry of Finance in local government fund utilization. Data were collected through an online survey of 145 respondents, predominantly from the Ministry of Finance and regional governments, and analyzed using SmartPLS 4.0. The results indicate that collaboration with CSR/PPP schemes has the most significant positive impact on fund optimization (path coefficient: 0.295, $p < 0.05$), followed by alignment with PSN (0.255, $p < 0.05$) and Ministry of Finance intervention (0.199, $p < 0.05$). Importance-Performance Map Analysis (IPMA) further highlights CSR/PPP collaboration as the highest-priority option due to its very high performance and importance. The study concludes that revising the current regulatory framework to incorporate CSR/PPP collaborations and PSN-aligned utilization can significantly enhance the optimalization of Tobacco Excise Revenue Sharing Fund (DBH CHT). These findings provide actionable policy recommendations for improving regional development and public welfare, though limitations such as sample representativeness and the need for long-term impact assessments are noted.

Keywords: Excise SEM-PLS, Tobacco excise duty, Tobacco excise revenue sharing fund (DBH CHT).

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1. Introduction

Indonesia is a developing country that always strives to ensure that the country's economy continues to grow. According to a press release by the BPS - Statistics Indonesia, economic growth in 2024 was recorded at 5.03% [1].

Economic growth was recorded to be almost the same as the economic growth in 2023 of 5.05% in 2023 [2]. This growth is still considered slowing down due to the global economic situation which is also experiencing a slowdown [3].

In a global economic situation full of uncertainty, the Government enacted various policies to encourage progress from various sectors. Starting from the manufacturing side, the real sector such as industries in the export sector, and various other sectors [4]. One of the efforts made by the government in supporting the improvement of the country's economy is the policy of providing Tobacco Excise Revenue Sharing Fund (DBH CHT) [5].

Tobacco Excise Revenue Sharing Fund (DBH CHT) is part of the allocation of funds transferred from the central government to local governments, which is determined based on a certain percentage of state revenues derived from tobacco excise generated in each region [6]. The use of tobacco excise revenue sharing fund has been carefully regulated to facilitate various programmes in several fields, including health, public welfare, law enforcement, and other activities [7].

Tobacco products are one of the goods subject to excise in Indonesia, Excisable goods (BKC) in Indonesia other than tobacco products are ethyl alcohol and beverages containing ethyl alcohol. Tobacco products contribute the highest excise revenue in Indonesia compared to revenue from other excisable goods.

Table 1.

State Revenue from Excise Duty Year 2015-2023.

Year	Total Excise Revenue	Tobacco Product Excise	Ethyl Alcohol Excise	Beverages containing Ethyl Alcohol Excise	Contribution's Percentage of Tobacco Product Excise to Total Excise Revenue
2023	Rp227.21 T	Rp218.70 T	Rp130.0 M	Rp8.38 T	96.25%
2022	Rp226.88 T	Rp218.62 T	Rp127.41 M	Rp8.07 T	96.35%
2021	Rp195.52 T	Rp188.81 T	Rp113.12 M	Rp6.50 T	96.56%
2020	Rp176.31 T	Rp170.2 T	Rp241.8 M	Rp5.80 T	96.6%
2019	Rp172.4 T	Rp164.9 T	Rp122.5 M	Rp7.3 T	95.64%
2018	Rp159.6 T	Rp152.9 T	Rp139.2 M	Rp6.4 T	95.80%
2017	Rp153.3 T	Rp147.7 T	Rp147.9 M	Rp5.5 T	96.34%
2016	Rp143.5 T	Rp137.9 T	Rp171.1 M	Rp5.3 T	96.09%
2015	Rp144.6 T	Rp139.9 T	Rp154.1 M	Rp4.5 T	96.74%

Source: Performance Report of Directorate General of Customs and Excise 2015-2023, and compiled by Author

Based on Table 1 it can be said that more than 96% of excise revenue comes from tobacco excise. Therefore, it can be said that tobacco excise contributes to a very significant state revenue in the field of excise. Excise on tobacco products (CHT) is an excise tax imposed on several tobacco products, such as cigarettes, cigars, leaf cigarettes, sliced tobacco and other tobacco processed products. Cigarettes or tobacco products are subject to excise because they are considered a Pigouvian tax-a tax levy imposed on a consumptive act that results in negative externalities for other economic activities. The proceeds of excise tax collection are used to prevent the consumption of excisable products. Excise proceeds, like other tax proceeds, are expected to return to society in the form of development. The government stipulates the existence of funds for tobacco excise revenue sharing to the excise-producing regions to carry out a predetermined development program [8].

Regional development in Indonesia often relies on the allocation of funds from various sources, one of which is the Tobacco Excise Revenue Sharing Fund (DBH CHT). Tobacco Excise Revenue Sharing Fund is a fund provided to tobacco-producing regions as compensation for the social and economic impacts of tobacco production [9]. These funds are expected to be used for various development activities, including health, education and infrastructure, to improve the welfare of the people in the region.

Based on the data and facts that have been presented, this study aims to optimize Tobacco Excise Revenue Sharing Fund Utilization by using Structural Equation Model (SEM) - Partial Least Square (PLS) approach and eventually enhance the Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024. This study will explore the available hypotheses to optimize the regulatory framework related to the Tobacco Excise Revenue Sharing Fund.

The Research of the problems raised include, how best to optimize current regulation by adding articles / options related to the utilization of tobacco excise revenue sharing fund other than those listed in Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024, exploration of options related to National Strategic Projects (PSN), Collaboration of Regional Transfer Funds with Corporate Social Responsibility (CSR) or Public Private Partnerships (PPP) schemes with Private Parties, and Intervention of utilization by the Ministry of Finance. This research aims to formulate the most effective policy recommendations in optimizing the Tobacco Excise Revenue Sharing Fund Utilization for the benefit of society.

2. Literature Review

2.1. Excise Duty

Indonesia has established excise-related policies in Law No. 11/1995 on Excise, which has undergone several amendments, most recently through Law No. 7/2021 on Harmonization of Taxation Regulations. Excise policy is a tax levy imposed on certain objects or goods [10]. Excise is imposed to control the production, consumption and circulation of excisable goods. According to the Law, excise is levied on goods that have certain properties and characteristics. The nature and characteristics of goods subject to excise are that their consumption needs to be controlled, their circulation

needs to be monitored, their use can have a negative impact on society and the environment, and their use requires the imposition of state levies for the sake of justice and balance (Law No. 7/2021 on Harmonization of Taxation Regulations). The implementation of excise tax is emphasized on the regular function, because people often perform actions without paying attention to the external consequences so that the costs paid seem to be cheaper than the costs should be [11].

2.2. Government Revenue Sharing Fund

Revenue-sharing fund (RSF), or dana bagi hasil (DBH), is one of the sources of local/regional government funding sourced from the State Revenue and Expenditure Budget allocated to the regions based on a certain percentage number to fund regional needs in the context of implementation decentralization. An earlier study by Lewis [12] suggested that fund transfers tended to stagnate at a low level, and this had an impact on limited spending on infrastructure which in turn impeded economic growth. Revenue Sharing Funds consists of Tax Revenue Sharing Funds and Natural Resource Revenue Sharing Funds [13]. According to Halim and Mujib [14] reduce vertical imbalance between the government and local governments, a system of sharing tax and non-tax revenues between the centre and the regions is carried out. According to Devas [15] the Revenue Sharing Fund is one of the sources of financing that is useful in supporting its public sector activities.

2.3. Tobacco Excise Revenue Sharing Fund

In an effort to provide legal certainty and justice, it is necessary to ensure that the utilization of Tobacco Excise Revenue Sharing Fund (DBH CHT) is in accordance with its purpose. Law No. 11/1995 on Excise mandates the existence of Tobacco Excise Revenue Sharing Funds. State revenue from tobacco excise made in Indonesia is distributed to provinces producing tobacco excise at 2% (two per cent) which is used to fund development activities. The use of Tobacco Excise Revenue Sharing Funds can be allocated to 5 (five) activities, such as improving the quality of raw materials, fostering industry, fostering the social environment, socialising excise provisions and eradicating illegal excisable goods. Of these activities, it has been regulated that the social environment development is set at a minimum of 50% of the total budget. Tobacco Excise Revenue Sharing Funds is distributed to Tobaccos Excise-producing provinces to help regions implement central government policies, to increase state revenue and anticipate the impact of smoking on health [16].

One of the reasons for regulating Tobacco Excise Revenue Sharing Fund is the existence of negative externalities on excisable goods in the form of tobacco products. Externalities are side effects caused by the use of cigarettes or tobacco products. The externality that arises is a negative externality given the dangers arising from the consumption of tobacco products. Massive actions need to be taken to protect the public from the side effects of using tobacco products. These actions can be in the form of countermeasures for negative effects such as use for improving health facilities for the community. The concept of using Tobacco Excise Revenue Sharing Fund is also called the earmarking policy. It means those funds will be set aside to fund certain activity programs [17]. In this case, part of the excise revenue is set aside specifically to fund programs affected using excisable goods in the form of tobacco products.

2.4. Conceptual Framework and Hypothesis Development

This research analyzes hypothetical recommendations and it that can be taken by the government in optimizing utilization related to Tobacco Excise Revenue Sharing Funds and strengthening the current regulation, which is Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024.

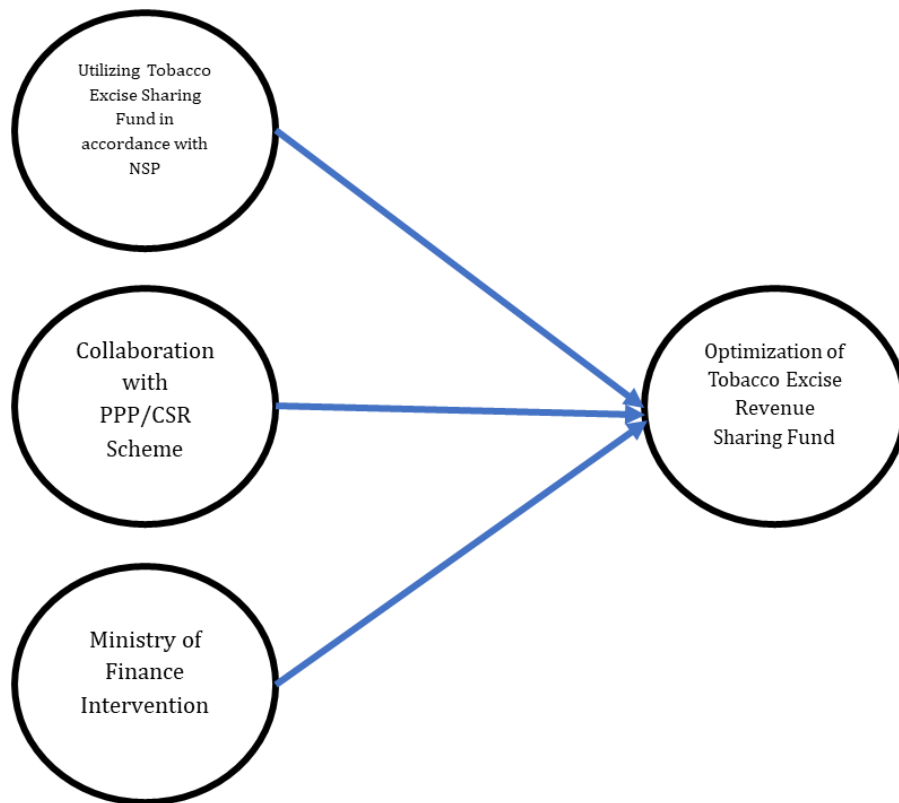


Figure 1.
Research Model.

These hypotheses are built based on the results of literature studies from previous research. The hypotheses are as follows:

H₁: Utilization of Tobacco Excise Revenue Sharing Funds related to the social environment development program can be carried out outside those stipulated in Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024 if it is in accordance with the National Strategic Project (PSN).

Based on research conducted by Mutiha [18] and Nawawi, et al. [19] in general, the utilization of revenue sharing funds that are well managed can increase the Human Development Index (HDI) of a region. Adur, et al. [20] also mentioned in their research that special allocation funds affect the economic development of a region, where local revenue and general allocation funds do not have a significant impact. This increase can occur if there is a community that has a good level of health management and has a high Quality of Life Index [21].

H₂: Collaboration in utilizing Tobacco Excise Revenue Sharing Funds by involving the private sector with Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes.

Gaievska, et al. [22] and Li and Akintoye [23] stated in their research that in the modern world, the institution of public-private partnerships is increasingly widespread, transforming into various forms of cooperation and becoming the basis for the implementation of various infrastructure projects, urban and community development, etc. at all levels of government. V research also shows that integrating Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes with government spending could create a synergistic model to enhance economic growth, especially in areas that have significant gaps in terms of resources and development.

H₃: Ministry of Finance Intervention related to Utilization of Tobacco Excise Revenue Sharing Funds by Local Government.

Research by Hoffman [24] and Lewis [25] found that empirical evidence on the actual impact of spending from regional transfer funds is still mixed. The portion of central deconcentration expenditure that is directly co-managed with local governments has a positive impact on public services in the regions. Meanwhile, some public services using funds that are executed solely by provincial/district/city governments, without significant input from the central government, have a negative impact on government service outcomes.

3. Methods

This research employs quantitative methods of explanatory and confirmatory research models to test the available hypotheses to optimize the existing regulatory framework. This test is conducted by distributing questionnaires to respondents. The survey results will be processed using the Structural Equation Model (SEM) - Partial Least Square (PLS) method using the SmartPLS 4.0 application.

The quantitative analysis method used in this research is Structural Equation Model (SEM) - Partial Least Square (PLS). SEM-PLS is a multivariate statistical analysis to estimate the effect between variables that is carried out simultaneously by emphasizing exploratory / prediction / structural model development studies [26]. SEM-PLS is a predictive and exploratory stream, which emphasizes predictive or exploratory studies / Model Development. Research

using the SEM-PLS method is often used for dissertations because it focuses on novelty / study and is more appropriate for predicting linear and non-existent hypotheses, rather than similar research methods such as CB-SEM methods (AMOS AND LISREL) [26].

3.1. Data Collection

Data for analysis related to this scientific study was obtained through an online survey distributed on various social media platforms, involving 145 respondents. The minimum number of respondents needed is based on 5 times the number of variables in the research model (12 variables), which means that the minimum number of respondents needed is 60 respondents [26]. The number of respondents is also still in the minimum sample category, which is between 142 and 155 respondents Kock and Hadaya [27]. Hair Jr, et al. [26] state that a large sample size in PLS can improve the accuracy or consistency of the PLS parameter estimation results. The nonprobability sampling method is used to take samples from the population [28].

The data in this study were measured using the Likert scale model. We use this model to gauge respondents' opinions, perceptions, and attitudes towards a given topic, offering alternative responses such as (1) strongly disagree with score, (2) disagree with score, (3) uncertain, (4) agree with score, (5) strongly agree with score. In the questionnaire that will be distributed to respondents, instructions for filling it out will also be provided so that it is easy for respondents to answer questions related to the variables to be studied

3.2. Measurement Items

Determination of variables and questionnaire questions based on research results from previous studies. In this study, variables that affect the dependent variable include the need for additional articles / options related to the utilization of Tobacco Excise Revenue Sharing Fund other than those listed in Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024, Tobacco Excise Revenue Sharing Fund utilization can be carried out if it is in accordance with the National Strategic Project (PSN), Collaboration of Tobacco Excise Revenue Sharing Fund utilization with CSR and PPP schemes, and Ministry of Finance Intervention related to Tobacco Excise Revenue Sharing Fund utilization by the Regional Government. Meanwhile, the dependent (independent) variable is Optimization of Tobacco Excise Revenue Sharing Fund utilization by improving the related regulatory framework. The measurement items are described in Table 2.

Table 2.
Measurement Items and Variable.

Variable	Measurement Items
Tobacco Excise Revenue Sharing Fund in accordance with National Strategic Projects (PSN)	PSN1 I believe the utilization of Tobacco Excise Revenue Sharing Fund in the field of Law Enforcement will be maximized if it can be done with the urgency of each need in the regions by referring to the National Strategic Project (PSN). Examples of National Strategic Projects (PSN) including allocating funds for legal assistance for farmers / tourism entrepreneurs / MSME-scale plantation entrepreneurs who are caught in legal problems.
	PSN2 I believe the utilization of Tobacco Excise Revenue Sharing Fund in the field of Community Welfare will be maximized if it can be used to support Regional Owned Enterprises in the region by referring to the National Strategic Project (PSN). Examples of National Strategic Projects (PSN) including Supporting Regional Owned Enterprises in the form of Drinking Water Companies to provide clean drinking water, or Regional Gas Companies to provide direct pipe connections from factories to homes.
	PSN3 I believe the utilization of Tobacco Excise Revenue Sharing Fund in the Health sector can be done outside of what is stated in Article 10 of Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024, if it must be in accordance with the National Strategic Project (PSN). Examples of National Strategic Projects (PSN) including supporting the free nutritious meal program, prevention of the monkeypox virus, providing vaccines for free when an outbreak occurs.
Collaboration of Tobacco Excise Revenue Sharing Fund with Corporate Social Responsibility (CSR) or Public Private Partnerships (PPP) schemes (COL)	COL1 I believe that by adding a CSR/PPP collaboration scheme with Tobacco Excise Revenue Sharing Fund in Article 13 of Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024, the Local Government can be more flexible in maximizing tobacco excise revenue sharing fund for the welfare of the region.
	COL2 I believe that with the limited Tobacco Excise Revenue Sharing Fund budget, funding collaboration with the private sector needs to be done in the form of Corporate Social Responsibility (CSR) / Public Private Partnership (PPP). Example: Tobacco Excise Revenue Sharing Fund is used to build an Artificial Intelligence (AI)-based Tobacco Products Industry Agglomeration by involving Google Indonesia and the local government.
	COL3

Variable	Measurement Items
	I believe the collaboration scheme of Tobacco Excise Revenue Sharing Fund by using private Corporate Social Responsibility (CSR) funds is an attractive option.
	COL4 I believe the collaboration scheme of Tobacco Excise Revenue Sharing Fund with Public Private Partnership (PPP) with tobacco excise revenue sharing fund owned by each Local Government can make a bigger impact on the society
Intervention of Tobacco Excise Revenue Sharing Fund utilization by the Ministry of Finance (KEU)	KEU1 To produce maximum utilization of Tobacco Excise Revenue Sharing Fund the Ministry of Finance can participate in designing, determining, and executing programs in the context of Tobacco Excise Revenue Sharing Fund utilization.
	KEU2 The Ministry of Finance can suggest, select, or determine ideas that will later be adopted for certain programs using Tobacco Excise Revenue Sharing Fund to produce maximum utilization of Tobacco Excise Revenue Sharing Fund
	KEU3 The Ministry of Finance may revise or terminate the program on the utilization activities of Tobacco Excise Revenue Sharing Fund that have been carried out to produce a more effective and targeted utilization of Tobacco Excise Revenue Sharing Fund
Optimization of Tobacco Excise Revenue Sharing Fund (OPT)	OPT1 The addition of articles / options related to the utilization of Tobacco Excise Revenue Sharing Fund in regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024 in accordance with the National Strategic Project (PSN), Collaboration on the utilization of Tobacco Excise Revenue Sharing Fund by involving the private sector with Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes, and Intervention of the Ministry of Finance to the Regional Government can be carried out so that the utilization of Tobacco Excise Revenue Sharing Fund can run more optimally.
	OPT2 It is necessary to revise the regulations regarding Tobacco Excise Revenue Sharing Fund by adding / changing the existing articles in accordance with the available options / proposals so that the utilization of Tobacco Excise Revenue Sharing Fund can be maximized to develop the economy and community welfare.

3.3. Data Analysis

The collected data will go through three stages of testing, namely measurement model evaluation, structural model evaluation, and model quality evaluation, using the SmartPLS 4.0 statistical tool [29]. The first stage is measurement model evaluation, which involves analyzing convergent validity and discriminant validity. Convergent validity includes three aspects, which must meet the criteria with a factor loading value ≥ 0.7 , composite reliability ≥ 0.7 , and average variance extracted (AVE) ≥ 0.5 [26]. As for discriminant validity, the Heterotrait Monotrait Ratio (HTMT) approach is used with the value suggested by Henseler, et al. [30].

The second stage is structural model evaluation, which consists of two steps, namely, checking for multicollinearity and partial hypothesis testing (direct effect). This test is carried out by analyzing the t-value and p-value, provided that the p-value must be less than 0.05 (5%) [26, 31].

In the third stage, evaluate the quality of the model using the r square table [32] and standardized root mean square to conclude whether the model fits the data [33]. Then validate the predictive power of the PLS model using the cross-validated predictive ability test (CVPAT) to determine whether the proposed PLS model has acceptable predictive ability [34].

Furthermore, a quantitative analysis is carried out by including the importance and performance perspectives using Importance-Performance Map Analysis (IPMA). IPMA helps identify priority areas for improvement by comparing the level of importance of a construct against the performance of the construct [35].

4. Result and Discussion

4.1. Result

4.1.1. Respondent Characteristics

The questionnaire results show that for gender between men and women, it is dominated by men with a ratio of 113:32. Respondents in this study are mostly aged between 23 to 50 years old. Diploma IV / Bachelor is the dominating education of respondents in this study with 60% and from work is dominated by Ministry of Finance employees with a presentation of 64.1%.

Table 3.
Respondent Characteristics.

Criteria	Description	Frequency	Percentage
Gender	Male	113	78%
	Female	32	22%
	Total		100%
Age (year)	23 - 30	49	34%
	31 - 40	75	52%
	>41	21	14%
	Total		100%
Educational Level	High School	5	3.4%
	Diploma 1 / Diploma 3	35	24.2%
	Diploma IV / Bachelor (S1)	87	60%
	Master (S2)	18	12.4%
	PhD (S3)	0	0%
	Total		100%
Occupation	Ministry of Finance	93	64.1%
	Regional Government	52	35.9%
	Total		100%

4.1.2. Evaluation of the Measurement Model

The measurement model in this study consists of a reflective measurement model in which the variables of the need for improvement of the utilization of Tobacco Excise Revenue Sharing Fund in accordance with National Strategic Projects (PSN), Collaboration of Tobacco Excise Revenue Sharing Fund with Corporate Social Responsibility (CSR) or Public Private Partnerships (PPP) schemes, and Intervention of Tobacco Excise Revenue Sharing Fund utilization by the Ministry of Finance, are measured reflectively. In Hair Jr, et al. [26] the evaluation of the reflective measurement model is convergent validity and discriminant validity. Convergent validity consists of loading factor ≥ 0.70 and composite reliability ≥ 0.70 .

4.1.2.1. Convergent Validity

The results of the three convergent validity indicators are as follows:

Table 4.
Outer Loading.

Indicator	Outer loadings	Description
KEU1 <- MoF Intervention	0.837	Valid
KEU2 <- MoF Intervention	0.834	Valid
KEU3 <- MoF Intervention	0.735	Valid
COL1 <- Collaboration with PPP/CSR Scheme	0.815	Valid
COL2 <- Collaboration with PPP/CSR Scheme	0.760	Valid
COL3 <- Collaboration with PPP/CSR Scheme	0.879	Valid
COL4 <- Collaboration with PPP/CSR Scheme	0.894	Valid
OPT1 <- Optimization of Tobacco Excise Revenue Sharing Fund	0.933	Valid
OPT2 <- Optimization of Tobacco Excise Revenue Sharing Fund	0.900	Valid
PSN1 <- Utilizing in accordance with NSP	0.916	Valid
PSN2 <- Utilizing in accordance with NSP	0.794	Valid
PSN3 <- Utilizing in accordance with NSP	0.901	Valid

Note:

Utilizing in accordance with NSP (PSN), Collaboration with PPP/CSR Scheme (COL), MoF Intervention (KEU), and Optimization of Tobacco Excise Revenue Sharing Fund (OPT).

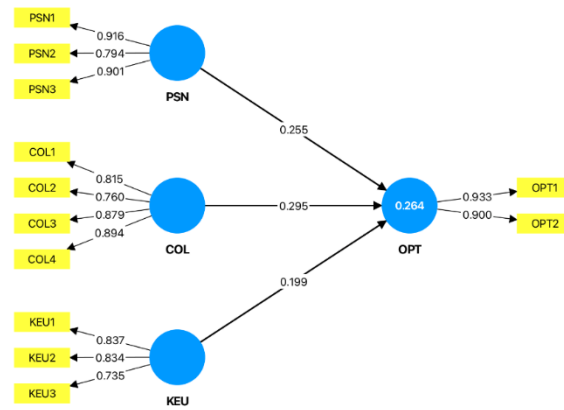


Figure 2.
Final Outer Model.

Table 5.
Composite Reliability and Average Variance Extracted (AVE).

Construct	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
MoF Intervention	0.736	0.845	0.645
Collaboration with PPP/CSR Scheme	0.858	0.904	0.703
Utilizing in accordance with NSP	0.843	0.905	0.761
Optimization of Tobacco Excise Revenue Sharing Fund	0.811	0.913	0.840

Overall, the measurement items have a loading factor ≥ 0.7 , the resulting variable reliability statistical measure has a value above 0.70 (reliable), and the AVE value is above 0.50. Based on these results, the convergent validity aspect is fulfilled.

4.1.2.2. Discriminant Validity

In Table 6, the HTMT values for pairs of variables are less than 0.90. This indicates that the variables have good discriminant validity.

Table 6.
HTMT.

Construct	Collaboration with PPP/CSR Scheme	MoF Intervention	Optimization of Tobacco Excise Revenue Sharing Fund	Utilizing in accordance with NSP
Collaboration with PPP/CSR Scheme				
MoF Intervention	0.281			
Optimization of Tobacco Excise Revenue Sharing Fund	0.479	0.346		
Utilizing in accordance with NSP	0.285	0.115	0.402	

4.1.2.3. Structural Model Evaluation

The next stage is the evaluation of the research hypothesis. The initial stage in this evaluation is carried out by checking whether there is multicollinearity between exogenous / endogenous variables and then testing the hypothesis to see whether the path coefficient is significant.

4.1.2.4. Multicollinearity Statistics

Multicollinearity can cause parameter estimates to be biased and even affect the significance of hypothesis testing [26]. Based on Table 7, the inner VIF < 5 , meaning there is no multicollinearity.

Table 7.
Inner VIF.

Construct	VIF
Collaboration with PPP/CSR Scheme \rightarrow Optimization of Tobacco Excise Revenue Sharing Fund	1.118
MoF Intervention \rightarrow Optimization of Tobacco Excise Revenue Sharing Fund	1.062
Utilizing in accordance with NSP \rightarrow Optimization of Tobacco Excise Revenue Sharing Fund	1.061

4.1.2.5. Hypothesis Testing

This test is carried out with an alpha significance level of 5% (two-sided), which means that if the t statistic exceeds 1.96 or the p-value is below 0.05, the hypothesis is considered accepted or there is a significant effect.

Table 8.
Path Coefficients.

Hypothesis	O sample	T stats.	P values	Description
COL → OPT	0.295	3.473	0.001	Accepted
KEU → OPT	0.199	2.864	0.004	Accepted
PSN → OPT	0.255	2.584	0.010	Accepted

Note: Utilizing in accordance with NSP (PSN), Collaboration with PPP/CSR Scheme (COL), MoF Intervention (KEU), and Optimization of Tobacco Excise Revenue Sharing Fund (OPT).

H1. The effect of adding options to utilize tobacco excise revenue sharing funds in accordance with the National Strategic Project (PSN) on the optimization of the utilization of tobacco excise revenue sharing funds (OPT) was significant at (0.255), with t statistics (2.584 > 1.96) or p value (0.010 < 0.05). Thus, this hypothesis is accepted. This means that any change in the variable of adding options for the utilization of tobacco excise revenue sharing funds in accordance with the National Strategic Project will have a positive impact on the optimization of the utilization of tobacco excise revenue sharing funds.

H2. The effect of collaborative utilization of tobacco excise revenue sharing funds by utilizing CSR or PPP schemes (COL) on the optimization of tobacco excise revenue sharing funds (OPT) is significant at (0.295), with t statistics (3.473 > 1.96) or p value (0.001 < 0.05). Thus, this hypothesis is also accepted. That is, any change in the variable collaboration scheme for the utilization of tobacco excise revenue sharing funds by utilizing CSR or PPP schemes has a positive impact on the optimization of the utilization of tobacco excise revenue sharing funds.

H3. The effect of MoF intervention (KEU) on the optimization of tobacco excise revenue sharing funds (OPT) was recorded at (0.199) and was not significant, with t statistics (2.864 > 1.96) or p value (0.004 < 0.05). Thus, this hypothesis is also accepted, meaning that any change in the Ministry of Finance's intervention variable has the potential to have a positive impact on the optimization of the utilization of tobacco excise revenue sharing funds.

Table 9.
Convident Interval.

Hypothesis	Original sample (O)	2.5%	97.5%
Collaboration with PPP/CSR Scheme → Optimization of Tobacco Excise Revenue Sharing Fund	0.295	0.129	0.463
MoF Intervention → Optimization of Tobacco Excise Revenue Sharing Fund	0.199	0.066	0.339
Utilizing in accordance with NSP → Optimization of Tobacco Excise Revenue Sharing Fund	0.255	0.083	0.465

The 95% convident interval output for each path coefficient shows the influence of variables. These findings are very important in formulating policy recommendations. Below are the convident interval results:

H1. The effect of utilization of tobacco excise revenue sharing funds when in accordance with the National Strategic Project (PSN) on the optimization of the utilization of tobacco excise revenue sharing funds (OPT) in the 95% convident interval ranged from 0.083 to 0.465. This indicates that utilization of tobacco excise revenue sharing funds in accordance with National Strategic Project can positively increase the optimization of tobacco excise revenue sharing funds up to 0.465.

H2. The effect of collaborative utilization with the PPP/CSR scheme (COL) on the optimization of tobacco excise revenue sharing fund utilization (OPT) in the 95% convident interval ranges from 0.129 to 0.463. This indicates that the tobacco excise revenue sharing funds utilization with the PPP / CSR collaboration scheme can positively increase the optimization of tobacco excise revenue sharing funds up to 0.463.

H3. The effect of MoF intervention on the optimization of tobacco excise revenue sharing funds utilization (OPT) in the 95% convident interval ranges from 0.066 to 0.339. This suggests that MoF intervention on tobacco excise revenue sharing funds utilization can positively increase tobacco excise revenue sharing funds optimization by up to 0.339.

4.1.3. Model Quality Evaluation

Evaluation of model quality is carried out using the coefficient of determination R Square and Adjusted R Square to assess the extent to which endogenous constructs can be explained by exogenous constructs [32].

Table 10.
R Square.

Dependent Variable	R-square	R-square adjusted
Optimization of Tobacco Excise Revenue Sharing Fund	0.264	0.248

The Adjusted R Square value is between 26% and 51%, so the influence of all exogenous constructs X1, X2, and X3 on Y can be considered moderate.

Table 11.
SRMR.

	Saturated model	Estimated model
SRMR	0.083	0.083

For the model to meet the criteria for model fit, the SMSR or Standardized Root Mean Square value must be <0.10 [33]. Based on Table 11. SRMR above, the value is $0.083 < 0.10$, so the model fits. So, it can be concluded that the model fits the data.

Table 12.
Cross-Validated Predictive Test (CVPAT)

Variable	PLS-SEM vs IA			PLS -SEM vs LM		
	Average loss difference	t value	p value	Average loss difference	t value	p value
Optimization of Tobacco Excise Revenue Sharing Fund	-0.107	2.418	0.017	-0.097	2.413	0.017
<i>Overall</i>	-0.107	2.418	0.017	-0.097	2.413	0.017

The calculation results show that the average loss difference value of the PLS and indicator average (IA) model comparison is negative for the endogenous variable of optimization of tobacco excise revenue sharing fund (-0.107) and testing the difference in prediction error between PLS and the indicator average model (IA) has a p-value <0.05 (significant) for the tobacco excise revenue sharing fund optimization variable. While the calculation of the comparison of the PLS model and the linear model (LM) is negative for the endogenous variable of tobacco excise revenue sharing fund optimization (-0.097) and testing the difference in prediction errors between PLS and the linear model (LM) model has a p-value <0.05 (significant) for the tobacco excise revenue sharing fund optimization variable. It can be concluded that the PLS-SEM model has higher predictive power compared to the indicator average (IA) model and the linear model (LM) model.

4.1.4. Importance-performance Map Analysis (IPMA)

IPMA analysis is used in PLS-SEM to extend quantitative analysis from the perspective of performance and importance. IPMA can identify key targets by comparing strong total effects. However, low performance allows the implementation of strategic decisions [36].

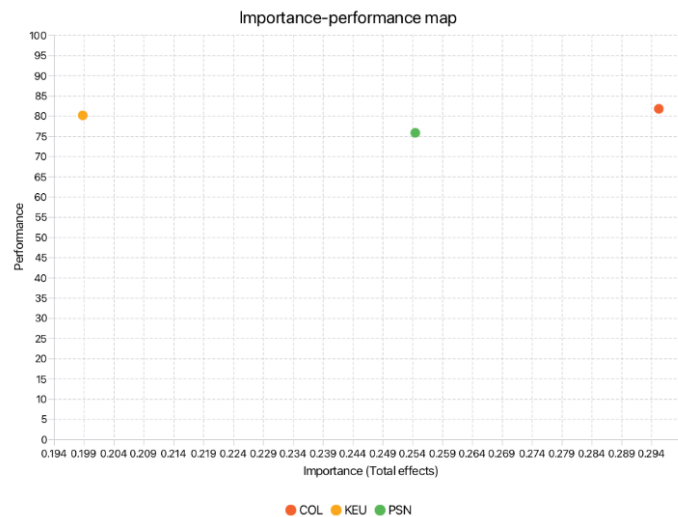


Figure 3.
Importance-performance Map Analysis (IPMA).

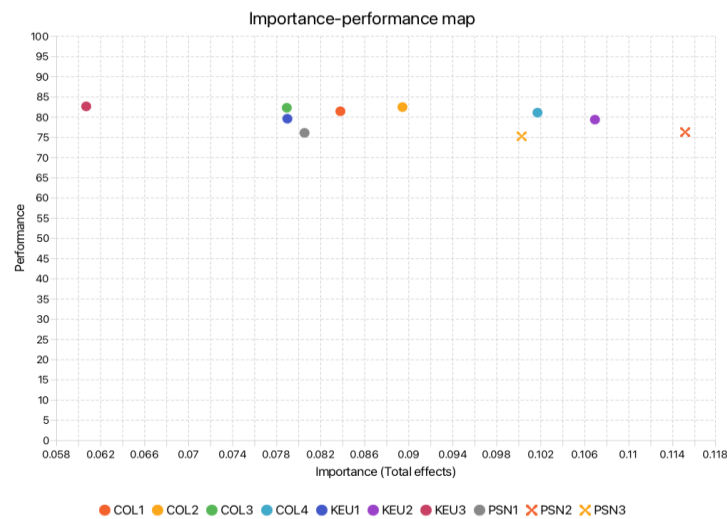


Figure 4.
Importance-performance Map Analysis (IPMA) per Variable.

The results show that if collaboration with PPP/CSR schemes is implemented, it will have very high performance and very high importance. Then if the utilization of tobacco excise revenue sharing funds in accordance with PSN is applied, it will have high performance and moderate importance. Meanwhile, if intervention in the utilization of tobacco excise revenue sharing funds by the Ministry of Finance is implemented, it will have very high performance and very low importance.

4.2. Discussion

4.2.1. Utilization of Tobacco Excise Revenue Sharing Funds Related to the Social Environment Development Program can be Carried out Outside those Stipulated in Regulation of the Ministry of Finance of the Republic of Indonesia Number 72/2024 if it is in accordance with the National Strategic Project (PSN).

Respondents generally supported that the utilization of tobacco excise revenue sharing fund would be more optimal if it can be done outside of what has been determined in Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024. The research findings indicate that the policy effect of utilizing tobacco excise revenue sharing fund in accordance with the National Strategic Project (PSN), with a 95% confidence interval, ranges from 0.083 to 0.465. This means that if tobacco excise revenue sharing fund can be utilized in accordance with the National Strategic Project (PSN), its impact on the optimization of related regulations will increase positively up to 0.465 or equivalent to 46.5%. The IPMA analysis also explains that if the utilization of tobacco excise revenue sharing funds can be carried out in accordance with the PSN, it will have high performance and moderate importance. In line with research conducted by Mutiha [18] and Nawawi, et al. [19] that the utilization of revenue sharing funds managed by local governments can increase the Human Development Index (HDI) if done in a more planned manner. By utilizing the central government's national strategic plan which has been compiled comprehensively and is more long-term, improving the welfare of the community can be done more efficiently and effectively.

4.2.2. Collaboration in Utilizing Tobacco Excise Revenue Sharing Fund by Involving the Private Sector with Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes.

Respondents also generally support that tobacco excise revenue sharing fund utilization will be maximized if it can be done with a collaborative scheme of Corporate Social Responsibility (CSR) and Public Private Partnership (PPP). The research findings indicate that the effect of collaboration with the PPP/CSR scheme, with a 95% confidence interval, ranges from 0.129 to 0.463. This means that if tobacco excise revenue sharing fund can be utilized with CSR or PPP collaboration schemes, the impact on optimizing the utilization of tobacco excise revenue sharing fund and the positive impact to the community will increase positively up to 0.463 or equivalent to 46%. Meanwhile, the IPMA analysis explains that tobacco excise revenue sharing fund utilization with a PPP / CSR collaboration scheme will have very high performance and very high importance. This is reinforced by research conducted by Gaievska, et al. [22], Li and Akintoye [23] and Adeyeye [37] that integrating Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) schemes with government spending could raise an economic growth, especially in areas that have lower resources and development, compared to another wealthy region.

4.2.3. Ministry of Finance Intervention related to Utilization of Tobacco Excise Revenue Sharing Funds by Local Government

In contrast to the previous two hypotheses, in this hypothesis, respondents were generally quite supportive that the utilization of tobacco excise revenue sharing fund would be maximized if there was an intervention by the Ministry of Finance. The research findings indicate that the effect of MoF Intervention, with a 95% confidence interval, ranges from 0.066 to 0.339. This means that if the utilization of tobacco excise revenue sharing fund can be intervened by the MoF, the

impact on the optimization of related regulations will increase positively up to 0.339 or equivalent to 34%. Meanwhile, the IPMA analysis explains that if the utilization of tobacco excise revenue sharing fund can be intervened by the Ministry of Finance, it will have very high performance and very low importance. This is in line with research conducted by Yulsiati, et al. [38] and Lihu, et al. [39] where Revenue-Sharing Funds (DBH) show no statistically significant impact on direct expenditures, suggesting these funds may not directly translate to programmatic spending. Thus, external intervention is needed to ensure the local government budgeting expenditure and subsequently improve local government financial management [40].

4.2.4. Optimization of Tobacco Excise Revenue Sharing Fund Utilization by Exploring Related Options And Improving the Regulatory Framework

Optimization of the utilization of tobacco excise revenue sharing funds is very important to be done immediately. In general, respondents believe that it is necessary to optimize the 3 options described above. In previous research conducted by Nur, et al. [41] showed that Revenue Sharing Fund, including Tobacco Excise Revenue Sharing Fund is important for reducing fiscal disparities and supporting local governments, excessive dependence on it may undermine local government performance. Previous research by Sibarani, et al. [42] also demonstrate that profit sharing funds do not directly influence capital expenditure allocation, the financial performance and expenditure patterns from the previous year significantly shape capital spending decisions by provincial governments.

The lack of impact of revenue-sharing funds that have been given by the central government to local governments has led to a slowdown in the economy and not maximizing public services in certain areas. Therefore, effective optimization of tobacco excise revenue sharing funds is needed to increase local revenue, improve community welfare, and accelerate infrastructure development. Well-managed Revenue Sharing Fund can also reduce disparities between regions and improve the quality of public services.

Overall, it seems that collaboration with CSR and PPP schemes can be a priority to be implemented immediately to optimize tobacco excise revenue sharing funds. By revising the current regulatory framework, or by issuing other related regulations, it is believed that this option will bring great benefits to the community or local government. For the utilization of tobacco excise revenue sharing funds in accordance with the National Strategic Project and the intervention of the Ministry of Finance, it seems that it can be done after conducting a Forum Group Discussion with related parties so that it can be considered to be applied or included in the relevant regulatory framework, given its high performance when applied in the utilization of these funds

5. Conclusion

Based on the results of this study, the optimization of tobacco excise revenue sharing funds utilization with the collaboration scheme of Corporate Social Responsibility (CSR) and Public Private Partnership (PPP) has the most significant and positive influence on the optimization of this revenue sharing utilization. Utilization of tobacco excise revenue sharing fund related to the social environmental development program if it is in accordance with the National Strategic Project (PSN) also has a significant influence despite its moderate importance. While the Ministry of Finance intervention option related to tobacco excise revenue sharing fund Utilization by Local Government has a significant potential influence but has low importance. Through data analysis, PPP / CSR collaboration can be carried out by revising the current regulatory framework, which is Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024, or by issuing new regulations related to the utilization of tobacco excise revenue sharing funds

6. Implications and Limitations

This research has several important implications. First, the research results provide a basis for the government to optimize the utilization of tobacco excise revenue sharing fund and improve the current regulatory framework, which is Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024 as a solution to optimize the utilization of tobacco excise revenue sharing funds in Indonesia. It is hoped that this policy recommendation will not only open up space for the government to explore several additional options that can be added to Regulation of The Ministry of Finance of the Republic of Indonesia Number 72/2024 or by creating a new regulation on its own, but can also open up other similar options by conducting further research related to other Revenue Sharing Fund.

However, this study also has limitations. The sample used, which is 145 respondents, may not be representative enough to describe the entire population, so the results have limitations in generalization. Limited time in preparing the scientific study is also one of the obstacles in exploring other options. In addition, this study only focuses on three hypothetical options, which are Utilization of tobacco excise revenue sharing fund in accordance with National Strategic Projects (PSN), collaboration of tobacco excise revenue sharing fund with CSR / PPP schemes and Intervention by the Ministry of Finance, where other relevant policy analysis is still needed but has not been analyzed. The method used, SEM-PLS, is more suitable for exploring the relationship between variables, so further research is needed to test the long-term impact. This study has also not addressed barriers to the implementation of these improvements, such as resistance from local governments or sufficient political support. Lastly, although this study examines the optimization of tobacco excise revenue sharing fund, the analysis of its economic impact on the tobacco excise industry has not been detailed, which is an important factor in ensuring the overall sustainability of the policy.

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