

## ANALYSIS OF PUBLIC SENTIMENT ON TAX POLICY OF VOLUNTARY DISCLOSURE PROGRAM WITH VADER APPROACH

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### *ABSTRACT*

This research aims to analyze public sentiment towards the existence of the Voluntary Disclosure Program tax policy on social media. This research method focuses on descriptive qualitative using sentiment analysis method with VADER (Valence Aware Dictionary and Sentiment Reasoner) approach. Data collection is done by using Twitter API and tweets based on keywords to see public perceptions of tax policy. The results showed that the public's opinion on the Voluntary Disclosure Program is very diverse, which is appreciation, support, and criticism. There is a neutral sentiment of 20%, moderately positive 28%, positive 37%, moderately negative 10% and negative 5%. Positive sentiment in this case obtained a greater value than negative sentiment, which means that public sentiment on the Voluntary Disclosure Program policy is quite good.

**Keywords** : Voluntary Disclosure Program; Tax policy; Sentiment analysis.

## I. INTRODUCTION

Tax policy plays a crucial role in shaping the economic landscape of a country, influencing government revenue, public services, and overall societal well-being. The design and implementation of tax policies have far-reaching implications on various aspects of a nation's economy and social structure (Saraçoğlu et al., 2018). In recent years, Indonesia has been considering various tax reforms to improve revenue collection, support sustainable development, and tackle emerging challenges like environmental sustainability.

In 2020, tax revenues in Indonesia have decreased (Dahlan et al., 2022; Salamah & Furqon, 2020; Syifa et al., 2022; Wahyuningsih & Atmadja, 2021). In order to strengthen financial sector institutions, the government and related agencies implement extraordinary policies and measures to maintain the stability of the national economy and financial system with various mitigation measures related to the implementation of the State Budget (APBN) (OECD, 2020). The government also issued several tax policies, one of which is the harmonization of tax regulations.

Law Number 7 of 2021 on Harmonization of Tax Regulations (HPP Law) provides for a number of amendments and the inclusion of new

provisions, including the Voluntary Disclosure Program (VDP) (Indonesia, 2021). One of the main objectives of the VDP is to improve taxpayer compliance. The VDP is implemented based on the principles of simplicity, legal certainty, and usefulness.

In tax amnesty Volume I, taxpayer participation only reached around 2.4% in 2017, and several years later, the level of taxpayer compliance also did not experience significant changes when compared to the previous year (Hasanah et al., 2021). The data results obtained in 2019 show that the level of taxpayer compliance is still in the range of around 70%, which remains below the standard set by the Organization for Economic Co-operation and Development (OECD), which is around 85% (Suwiknyo, 2019). Even so, the government remains committed to optimizing tax revenue by launching *Tax Amnesty* Volume II, also known as the Voluntary Disclosure Program (VDP). The opportunity for tax amnesty Volume II is predicted to be successful if the socialization is carried out optimally, there is no perception that tax amnesty harms honest taxpayers, and there is a view from taxpayers that this tax amnesty is the last so that there is a fear of not paying taxes and being fined.

Understanding public perceptions of tax policy is vital as it can affect compliance rates, revenue collection, and the overall efficacy of tax regulations. Research indicates that public sentiment plays a substantial role in shaping policy decisions (Melton et al., 2021). One of the main driving factors for taxpayers to comply with their tax obligations is trust in the government (Ningtyas & Aisyaturrahmi, 2022). Tax policies designed by the DGT (Directorate General of Taxes) can trigger a variety of responses among the public (Anggraeni et al., 2023). These responses contain various sentiments as well as positive and negative responses in the social media platform environment. Social media platforms have become an important source for information dissemination, especially during the COVID-19 social distancing period (Prihatiningtias & Karo, 2021). The huge potential of social media platforms in shaping opinions requires communication management from governments and policymakers (Tsoy et al., 2021). Therefore, the aspirations and *concerns of* the community need to be considered and responded (Shrivastava & Kumar, 2019).

Examining public perceptions of tax policy in Indonesia is crucial for policymakers to develop tax systems that are not only efficient but also align with public expectations and values. Tax research related to the Voluntary Disclosure Program (VDP) is still rare, and research related to this topic is still not varied (Nafis &

Yuhertiana, 2023). The purpose of this study is to determine how the public reacts in response to tax policies, especially the Voluntary Disclosure Program so that the results of this study can be obtained important points for improving tax policy in Indonesia that are relevant to the alignment of the community and provide policy suggestions related to tax reform.

## II. RESEARCH METHOD

The methodology for this paper involves utilizing sentiment analysis with the VADER (Valence Aware Dictionary and Sentiment Reasoner) approach to analyze public perceptions of tax policy through Twitter data collected via the Twitter API. VADER is a rule-based model designed for sentiment analysis of social media text (Hutto & Gilbert, 2014). It calculates a composite score to classify tweets into positive, negative, or neutral categories (Sukmana, 2023). The sentiment score of a text, such as a tweet, is computed by summing the sentiment scores of individual words in the text (Katsafados et al., 2023). The sentiment analysis process involves determining tweet polarity and sentiment intensity, which are then classified using multiclass sentiment analysis (Arifka et al., 2022). The public perceptions analyzed by VADER in this study were classified into five sentiment levels: neutral, moderately positive, positive, moderately negative, and negative.

### III. RESULTS AND DISCUSSION

The first stage of this research is data collection with Twitter API keys starting from January 1, 2022 to March 7, 2023 with the keywords in Indonesian: "*Program Pengungkapan Sukarela*", "*Kebijakan PPS*", "*Pajak PPS*", "tax amnesty"; "tax amnesty 2", and "tax amnesty II" and collected 8,349 tweets.

Next, from the 8,349 retrieved tweets, the author filtered out unnecessary data, such as removing bot accounts and retweet redundancies (tweets posted repeatedly with the exact same content). This process resulted in the remaining 4,426 tweets.

The second stage is *preprocessing*. At this stage, several text processing processes are carried out which include *cleansing* (removing punctuation marks and characters such as emojis, *mentions*, hashtags, etc.), *case folding* (making *tweet* data lowercase), *removing stopwords* (removal of common words), *tokenization* (breaking a text into several parts), and *stemming* (removing affix words and converting to basic words).

After completing the *preprocessing* stage, the next step is the translation stage from Indonesian to English. This is necessary because researchers use the VADER sentiment analysis *library* which operates in English. After the translation process is complete, the next step is *tweet* classification. At

this stage, *sentiment labeling* and *polarity* score calculation are performed. The approach used is *Lexicon Based*, where the method relies on the dictionary as the language or lexical base.

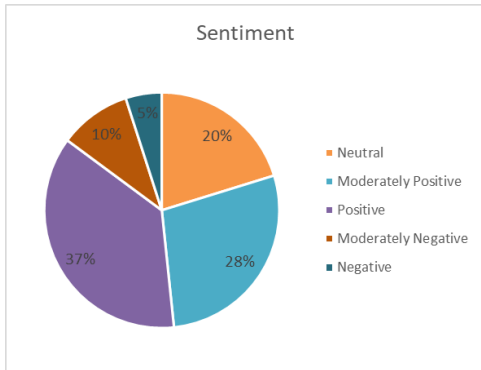
**Table 1.** *Sentiment analysis process with VADER*

Process	Before	After
<i>Cleansing</i>	It's called a voluntary disclosure program but assets that are not disclosed are even subject to sanctions so it's confusing 😞	Its called a voluntary disclosure program but assets that are not disclosed are even subject to sanctions so its confusing
<i>Case folding</i>	Its called a voluntary disclosure program but assets that are not disclosed are even subject to sanctions so its confusing	its called a voluntary disclosure program but assets that are not disclosed are even subject to sanctions so its confusing
<i>Remove stopwords</i>	its called a voluntary disclosure program but assets that are not disclosed are even subject to sanctions so its confusing	called voluntary disclosure program confused sanctioned assets
<i>Tokenization</i>	called voluntary disclosure program confused sanctioned assets	[called, voluntary, disclosure, program, confused, sanctioned, assets]
<i>Stemming</i>	[called, disclosure, confused, assets], [voluntary, program, sanctioned, assets]	[called, disclosure, confuse, assets], [voluntary, program, sanction, assets]
<i>Scores</i>	{ 'neg': 0.219, 'neu': 0.571, 'pos': 0.21, 'compound': -0.0258 }	
<i>Compound</i>	-0.0258	
<i>Sentiment</i>	Moderately Negative	

*Source:* data processed, 2023

After all stages have been completed, it is visualized to determine the percentage accuracy results of each polarity class. The percentage accuracy results obtained are 20% for the percentage accuracy of the neutral sentiment class, 28% for the percentage accuracy of the moderately positive sentiment class, 37% for the percentage accuracy of

the positive sentiment class, 10% for the percentage accuracy of the moderately negative sentiment class, 5% for the percentage accuracy of the negative sentiment class. The visualization results are shown in the form of a diagram below.



Source: data processed, 2023

**Figure 1. Sentiment Visualization Results**

Examples of *tweet* content based on sentiment class are presented in the following table:

**Table 2. Sentiment content**

Sentiment Class	Content
Neutral	IMAN_luv_Garuda: 2022 VOLUNTARY DISCLOSURE PROGRAM (PPS), TAX AMNESTI JILID II BEGINS... <a href="https://t.co/v7PwJgWTIK">https://t.co/v7PwJgWTIK</a> via @YouTube
	ex_badjingan83: @mrs_enci PPS now called Tea, voluntary disclosure program. Just in case someone misses it, land jeung sand 5 trucks.
	lambadung: Who was emailed by PPS Tax?
Moderately Positive	edy_siregar_77: The government started to run the Voluntary Disclosure Program or Tax Amnesty Volume II for taxpayers. Business figures give news, conglomerates will participate.
	mauliana0107: @kring_pajak In the event that the taxpayer is issued an audit letter after the HPP Law is

	enacted, can the taxpayer still participate in the PPS?
Positive	Laurensiusega: Starting today until the middle of the year, the busy period begins in taking care of Tax Amnesty Volume 2 and Annual Tax Return Reporting for clients. Kudu semangat HerrDwi: @rorotarita @irfanadhic @efenerr @rnsalsabila_ Just consult the KPP where you are registered. It will be helped to explain what must be done and how. Especially since the Voluntary Disclosure Program period is currently underway, you can take advantage of it...
Moderately Negative	Rosaadewinta: It's called a voluntary disclosure program but undisclosed assets are even subject to sanctions so I'm confused 😞 eg_nrs: How complicated is this technical PPS/tax voluntary disclosure program... Tricky and complicated 😞 Every day so join the socialization ☐
Negative	rizky_dian_hadi: Tax Amnesty. Small thieves are judged, big thieves are forgiven @mohmahfudmd Uuebu: The government has no sense of crisis. Fund IKN under the pretext of aggressively caro onjek new taxes, with the tax director general program with PPS in addition to Tax amnesty. the government is too imposing, there is no benefit for Indonesian families in the long term. #Indonesia #IKN just another #MercurSuar project WongIndonesiaOK: @Gito1921 @detikcom The tax amnesty used to be to attract conglomerates whose money stopped abroad ... but it failed miserably ... finally it was ordinary people who were targeted to meet the tax revenue target ... the savage thing is that tax officials live hedonistically in front of taxpayers who become cash cows

Source: data processed, 2023

The table 2 shows examples of *tweets* depicting different sentiment classes based on VADER analysis on the Voluntary Disclosure Program (VPD) or “PPS” (*Program Pengungkapan*



also Twitter accounts that provide live *updates* on the implementation of the VDP.

2. Taxpayer Participation: Most conversations focused on questions or discussions around taxpayer participation in the program. Some users asked whether taxpayers can participate in this program after receiving an audit letter from the tax authority.
3. Technicalities of Voluntary Disclosure Program Implementation: Several accounts expressed technical difficulties and the complexity of the VDP implementation, including the sanctions applied. They said that the socialization of the VDP was also lacking.
4. Comparison with Tax Amnesty: Some *tweets* implied a comparison between VDP and the previous *tax amnesty* program. Some people expressed the view that this program did not provide benefits to the community.
5. Technical Suggestions and Discussions: Some *tweets* also contained technical advice and discussions related to the implementation of the VDP. There were users who actively provided advice on consulting with registered tax offices and taking advantage of the Voluntary Disclosure Program period.

On the positive sentiment, it is shown that some of the public welcomed the commencement of the Voluntary

Disclosure Program and Tax Amnesty Volume II, considering it a positive step by the government in improving taxpayer compliance. There are expressions of enthusiasm and support for the implementation of Tax Amnesty Volume 2, as expressed by one account that expressed its busyness in managing the program. Positive advice was also given by another account that suggested taking advantage of the Voluntary Disclosure Program period by consulting at the tax office where registered. In line with research Bai et al. (2022) During the COVID-19 pandemic, sentiment to increase taxes decreased and sentiment to reduce taxes increased. The tax burden borne by the community can encourage people to participate in tax incentive programs in the hope of easing their burden, in line with research by Yuwono & Purwanti (2022).

Neutral sentiment was shown by users who conveyed information related to *updates* about the start of the VDP program, questions and discussions about program technicalities. There is still a need for socialization or assistance related to this tax policy so that information can be received more thoroughly. As research Diana & Eforis (2022) who said that frequent socialization can significantly encourage taxpayers to take advantage of tax incentives.

There were negative responses from some users who expressed dissatisfaction and confusion regarding the Voluntary Disclosure Program. The public expressed confusion regarding the sanctions

imposed on this program, disagreement with government policies related to *tax amnesty* and VDP, and criticism of the long-term benefits for the community. The existence of this tax amnesty program only benefits certain parties, not all people.

In line with research (Ningtyas & Aisyaturrahmi, 2022) about the Voluntary Disclosure Program, that taxpayers tend to follow policies if they are beneficial and profitable for them. This is also inseparable from the guarantee of security and justice that the government must provide to taxpayers. As also stated by Yulianto et al. (2021) that taxpayers expect fairness regarding the tax collection system. Taxpayers expect the reciprocity received to be proportional to the taxes paid by them.

The public's response to the VDP tends to vary, indicating different opinions and perceptions regarding the program. Factors such as perceived sanctions, technical complexity of the program, and long-term benefits are key factors in shaping public sentiment towards the Voluntary Disclosure Program.

Based on the results of the analysis above, it shows that public views on the Voluntary Disclosure Program (VDP) vary widely. There is positive sentiment in the form of appreciation and support for the VDP, especially in the effort to overcome the post-pandemic economic impact. Many believe that the VDP has the potential to boost economic growth and improve taxpayer compliance.

However, there were also negative sentiments that included criticism of the unequal distribution of the VDP, as well as inequality in the provision of VDP benefits. Some users also expressed concerns regarding potential technical difficulties in joining the program and the complexity of the procedures that may confuse taxpayers.

Overall, the sentiment analysis of the *tweet* data reflects the polarity of people's views on VDP, with appreciation and support on the one hand, and criticism of VDP distribution and inequality in benefit delivery on the other. This analysis can provide useful insights in understanding how the public responds to and understands tax policies enacted by the government.

#### **IV. CONCLUSION**

An analysis of public sentiment towards the Voluntary Disclosure Program (VDP) shows that the majority of public sentiment is positive. Public views on the VDP are more appreciation and support. Appreciation and support for the Voluntary Disclosure Program (VDP) is generally based on its potential to address post-pandemic economic impacts, promote economic growth, and improve taxpayer compliance. The limitation of this study is that the data collection process still allows for twitter accounts to be retrieved from institutional accounts (not personal) where neutral and positive tweets can



be vague, so that a sorting process and in-depth analysis is needed.

The implications of this study on theory suggest that sentiment analysis can be an effective tool to understand public response to tax policy. This study strengthens the existing literature on the importance of public perception in influencing taxpayer compliance and tax policy effectiveness. Practically, the results of this study provide insights for Indonesian policymakers on how VDP policies are received by the public, including areas of support and criticism. This information can be used by the Directorate General of Taxes (DGT) to improve future communication strategies and tax policy socialisation, taking into account public sentiment to improve taxpayer compliance and ensure successful policy implementation.

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