

**THE DETERMINANTS OF TOBACCO PRODUCTION
IN CENTRAL JAVA**



THESIS

**SUBMITTED TO THE FACULTY OF ISLAMIC ECONOMICS
AND BUSINESS
SUNAN KALIJAGA STATE ISLAMIC UNIVERSITY, YOGYAKARTA
AS ONE OF THE REQUIREMENTS FOR OBTAINING A BACHELOR'S
DEGREE IN SHARIA ECONOMICS**

**BY:
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NIM. 22108010047**

**BACHELOR OF SHARIA ECONOMICS PROGRAM
FACULTY OF ISLAMIC ECONOMICS AND BUSINESS
STATE ISLAMIC UNIVERSITY OF SUNAN KALIJAGA
YOGYAKARTA
2026**

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STATE ISLAMIC UNIVERSITY OF SUNAN KALIJAGA
YOGYAKARTA**

2026

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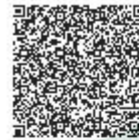
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THESIS APPROVAL LETTER

To:

Dear Dean of the Faculty of Islamic Economics and Business

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In Yogyakarta

Assalamualaikum wr.wb.

After reading, researching, providing clues and correcting and making corrections as necessary, I as a supervisor am of the opinion that your thesis:

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Thesis Title : The Determinants of Tobacco Production In Central Java

It can be submitted to the Faculty of Islamic Economics and Business, Department Sharia Economics Study Program, UIN Sunan Kalijaga Yogyakarta as one of the requirements to obtain a Bachelor of Islamic Economics.

With this, I hope that the thesis mentioned above can be submitted soon. I thank you for your attention.

Yogyakarta, 3 June 2026

Acknowledged,

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STATEMENT OF AUTHENTICITY OF THESIS

STATEMENT OF AUTHENTICITY OF THESIS

The undersigned:

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I declare truthfully, that my thesis entitled: "The Determinants of Tobacco Production in Central Java" is a personal work and as far the author's knowledge does not contain material published or written by others, except for certain parts that the author takes as a reference.

If its proven that this statement is not true, then it is entirely the responsibility of the compiler.

Yogyakarta, 3 June 2026

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22108010047

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For the sake of scientific development, I agree to grant Sunan Kalijaga Yogyakarta Islamic State University Non-Exclusive Royalty-Free Rights for my scientific work entitled: “The Determinants of Tobacco Production In Central Java”

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22108010047

MOTTO

"So, surely with hardship comes ease."

-Al-Insyirah-



ACKNOWLEDGMENT SHEET

With all gratitude, I dedicate this thesis to:

The three most important people in my life are Bapak, Ibu dan Mas.

Thank you for trusting this youngest child to make decisions and take the next steps in my higher education. With all the guidance and support you have provided, I have been able to complete my studies. I also want to thank you for the prayers and love you have given me up to this very moment, which have been a source of encouragement for me in finishing my studies.



LITERACY GUIDELINES

In preparing this thesis, the transliteration of Arabic words follows the guidelines set forth in the Joint Decree of the Minister of Religious Affairs and the Minister of Education and Culture of the Republic of Indonesia No. 158 of 1987 and No. 0543b/U/1987.

A. Single Consonant

Arabic script	Na me	Latin script	Explanation
ا	alif	not represented	not represented
ب	bā'	b	be
ت	tā'	t	te
ث	ṣā'	ṣ	es (with a dot above)
ج	jim	j	je
ح	ḥā'	ḥ	ha (with a dot below)
خ	khā'	kh	ka and ha
د	dāl	d	de
ذ	ẓāl	ẓ	zet (with a dot above)
ر	rā'	r	er
ز	zāi	z	zet
س	sīn	s	es
ش	syīn	sy	es and ye
ص	ṣād	ṣ	es (with a dot below)
ض	ḍād	ḍ	de (with a dot below)
ط	ṭā'	ṭ	te (with a dot below)

ظ	zā'	z	zet (with a dot below)
ع	'ain	'	inverted comma above
غ	gain	g	ge
ف	fā'	f	ef
ق	qāf	q	qi
ك	kāf	k	ka
ل	lām	l	el
م	mīm	m	em
ن	nūn	n	en
و	wāwu	w	w
هـ	hā'	h	ha
-	hamza h	,	apostrof
ي	yā'	Y	ye

B. Double Consonants due to Syaddah are Written as Double Letters

ممتددة	written	<i>muta'addidah</i>
عدة	written	<i>'iddah</i>

C. Tā' Marbutāh at the End of a Sentence

- a. Written with *h* if pronounced *Sukun*.

حكمة	written	<i>ḥikmah</i>
جزية	written	<i>jizyah</i>

- b. When followed by the definite article '*al*' and the two words are read separately, it is written with an *h*.

كرامة الولياء	written	<i>karāmah al-auliā'</i>
---------------	---------	--------------------------

- c. When *Tā'marbutāh* is followed by *fathāh*, *kasrah*, or *dāmah*, it is written as *ny t* or *h*.

زكاة الفطرة	written	<i>zakatā al-fitrāh</i>
-------------	---------	-------------------------

D. Short Vowels and Their Application

Every *tā' marbūṭah* letter is transliterated into the letter 'h', both when it is at the end of a single word and when it is in the middle of a series of words (for example, when followed by the article 'al-'). However, this rule does not apply to words borrowed from Arabic that have become part of the Indonesian vocabulary, such as *shalat*, *Zakah*, and so on, unless the original spelling is explicitly desired.

_____	fathah	written	a
_____	kasrah	written	i
_____	ḍammah	written	u
فَعَلَ	fathah	written	fa'ala
ذَكَرَ	kasrah	written	zūkira
يَذْهَبُ	ḍammah	written	yaḏhabu

E. Long Vowels

1	fathah + alif جاهلية	written	ā <i>jāhiliyah</i>
---	-------------------------	---------	-----------------------

2	fathah + yā'mati تنسى	written	ā tans ā
3	kasrah + yā'mati كريم	written	i karim
4	ḍammah + wāwu mati فروض	written	ū furūd

F. Double Vowels

1	fathah + yā'mati بينكم	written	ai bainakum
2	fathah + wāwu mati قول	written	au qaul

G. Consecutive short vowels in a single word are separated by an apostrophe

أَنْتُمْ	written	a'antum
أَعَدَّتْ	written	u'iddat
لَنْ شَكْرْتُمْ	written	la'in syakartum

H. The definite article alif + Lam

- If followed by a *Qamariyyah* letter, it can be written using the initial letter “al”.

القرآن	written	<i>al-Qur'ān</i>
القياس	written	<i>al-Qiyās</i>

- b. If followed by a *Syamsiyyah* letter, it is written according to the first letter of that *Syamsiyyah*.

السماء	written	<i>al-Samā'</i>
الشمس	written	<i>al-Syams</i>

I. Writing Words in Sentences

Written according to their spelling

ذوى الفروض	written	<i>ẓawī al-furūd</i>
أهل السنّة	written	<i>ahl as-sunnah</i>

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PREFACE

All praise be to Allah, the Most Gracious, the Most Merciful. The grateful author offers thanks to Allah SWT for His abundant mercy and guidance, which enabled the successful completion of this thesis entitled **“The Determinants of Tobacco Production in Central Java”**. May peace and blessings be upon our Prophet Muhammad SAW, his family, companions, and all his followers until the end of time.

Thanks to the support of various parties, this thesis has finally been completed successfully. Therefore, on this occasion, the author would like to express her deepest gratitude to:

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15. Keluarga Nologaten, a group that came together by chance—thank you, Farhan, Ocha, Fauziy, Iga, Vita, Rora, and Vera. Thank you for welcoming me into your circle of friends; though brief, those memories will never fade. Even though we don't communicate much these days, I hope that someday we can meet again, each of us at our best.
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21. Last but not least, I am very proud of myself for having fought through everything and chosen to keep living after all I've been through. Even through tears and moments of instability, this writing serves as proof that, after falling and getting hurt, this little girl can still get back up on her own two feet.

May all the kindness shown be counted as righteous deeds, may Allah SWT make all matters easy, and may this thesis also be of benefit to the readers. Amen.

Yogyakarta, 3 June 2026

Undersigned,



Kamalia Uswatun Chasanah

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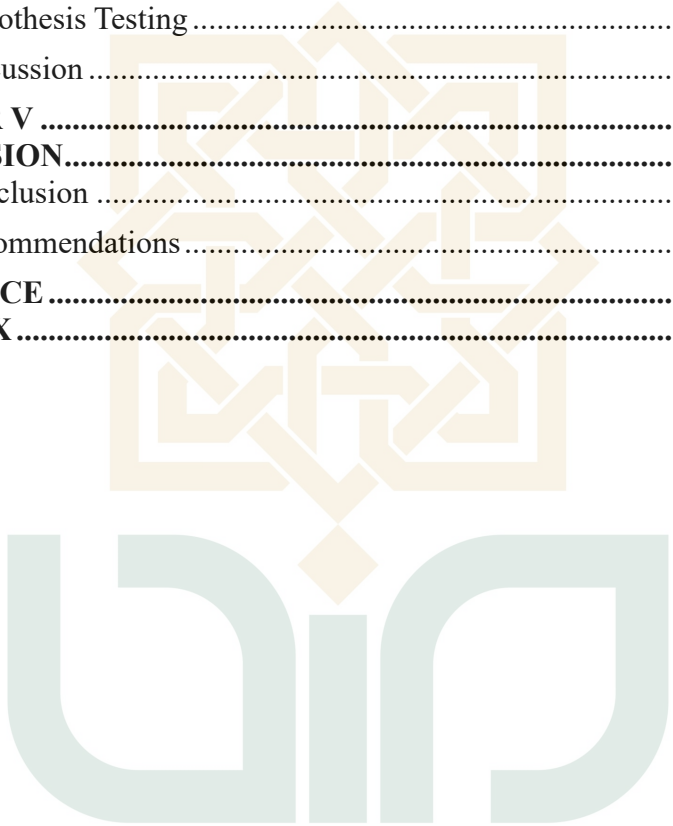


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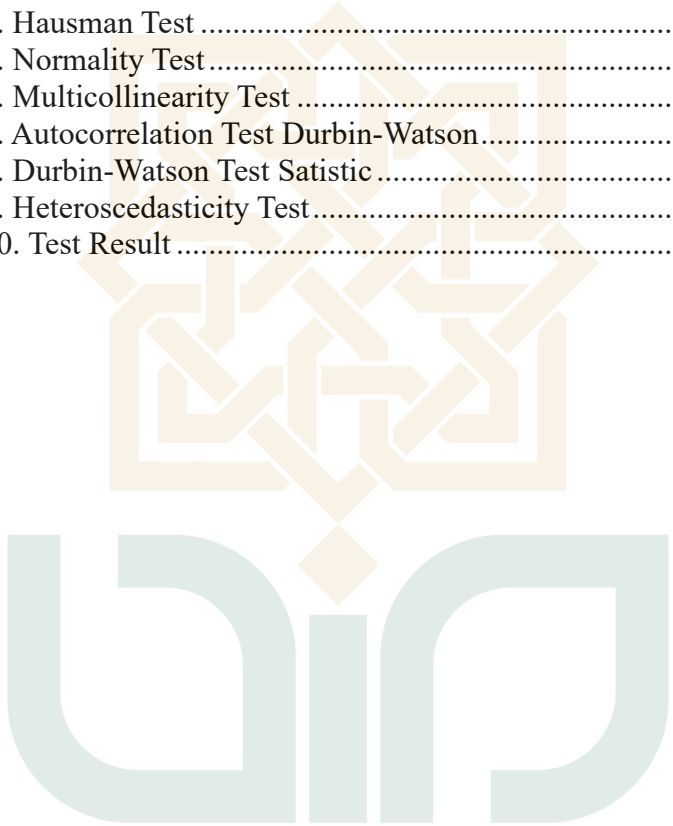
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ABSTRACT

This study analyzes the impact of tobacco land area, tobacco selling price, and the number of tobacco farmers on tobacco production in Central Java Province from 2014 to 2025. Secondary data obtained from the Central Bureau of Statistics (BPS) were analyzed using panel data regression with the Fixed Effect Model (FEM) approach across 24 regencies/cities (286 total panel observations). Simultaneously, the results show that all independent variables significantly affect tobacco production, accounting for 96.24% of the total variance in production. Partially, tobacco land area and the number of tobacco farmers have a statistically significant positive effect on tobacco production at the 5% significance level. Conversely, the tobacco selling price shows a negative and statistically non-significant effect on production volume. This study highlights the importance of preserving productive agricultural land, enhancing farmer capability, and stabilizing market trading mechanisms to sustain regional tobacco production growth.

Keywords: Tobacco Production, Tobacco Land Area, Tobacco Selling Price, Number of Farmers, Fixed Effect Model (FEM).



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CHAPTER I

INTRODUCTION

A. Background Study

Agribusiness is a sector that is a major focus and the face of a country's economy. It has even been said that agribusiness is the most attention-grabbing mega-business sector (Yola et al., 2023). This sector contributes significantly to the country's economic system. It can even be used as a national export business to boost the economy. This is because agribusiness, in its implementation, is a driving force of the global economy, especially in developing countries, as evidenced by its contribution to GDP, employment, and even its role as a food supplier (Chatra et al., 2024). Many countries have made this sector a leading sector, given its extraordinary contribution to economic growth.

Tobacco is one agribusiness commodity with high economic value and a key supply chain in both global and domestic markets. State revenue from tobacco comes from taxes. The high selling price of tobacco is influenced by the high taxes imposed (Nargis et al., 2021). The higher the taxes imposed, the greater the increase in state revenue. This certainly makes tobacco a commodity with high economic value. However, from an international perspective, tobacco faces constant dynamics, particularly related to commodity market fluctuations and international health regulations. Tobacco use in cigarettes is associated with an increased risk of cardiovascular disease, respiratory disease, cancer, diabetes, hypertension, and others. Healthcare expenditures due to these diseases reached US\$422 billion in 2012, or 571,436 billion in 2012, equivalent to 1.8% of the

world's annual gross domestic product (GDP). Approximately 40% of these costs occur in developing countries (Bateson, 2022).

In Indonesia, tobacco itself is one of the largest commodities contributing to state revenue through excise (Direktorat Jenderal Bea dan Cukai, 2023). During the 2022-2025 period, tobacco commodities contributed US\$338.9 million in state revenue through exports (Badan Pusat Statistik, 2025). This is quite significant considering that tobacco is a seasonal crop that only produces at certain times. In addition to boosting the economy through excise taxes, tobacco also drives economic growth through GRDP. The agricultural sector is a leading sector in driving economic growth through GRDP (Zuhdi, 2021). This proves that tobacco, an agricultural commodity, also contributes to GRDP. The price of a commodity indirectly impacts the growth of a country's economy (M. L. Purba et al., 2021). Price increases and productivity increases can drive increases in the production of a commodity, which represents economic performance.

Tobacco excise plays a crucial role in the Indonesian economy, not only as a source of state revenue but also as a tool to control cigarette consumption (Sondayani, 2024, p. 15). Another obstacle faced by tobacco farmers is the annual increase in tobacco excise taxes, which has led to a decline in tobacco sales. If the cigarette excise tax increase is implemented, it is suspected that companies will respond by raising cigarette prices (Septiadi et al., 2021, p. 92). A significant increase in excise tax forces cigarette manufacturers to raise the selling price of cigarettes, which leads to a reduction in cigarette consumption

in the community, which in turn impacts farmers because the decreased demand for cigarettes also leads to a decrease in demand for tobacco. The policy of increasing the price of tobacco excise tax has put pressure on the production of tobacco farmers, resulting in a decrease in the selling price of dried tobacco (Sabrina, 2022). The community's dependence on tobacco is very high. When harvests fail or prices plummet, the community becomes economically vulnerable.

Agriculture continues to play a vital role in supporting rural development, economic stability, and community welfare in the Midwest, despite the transformations and adjustments caused by national and global economic dynamics (Lurie & Brekken, 2017, p. 114). In accordance with this statement, agriculture is one of the sectors that provides livelihood opportunities for many people. Many groups in society, besides farmers, are economically impacted by this tobacco season. With regional conditions favorable for tobacco production, many residents rely on this seasonal crop. Some employ labor from outside the family due to the vast area of land they manage (D. G. K. Hasugian et al., 2023, p. 1698). Many landless people in mountainous areas also rely on this crop. Many of them work as part-time tobacco workers. They typically participate in the tobacco harvesting process, thinly slicing, drying, and packaging. Some owners allow workers to take the tobacco home to cut and then return it to the owner. Farmers in the upper or mountainous areas with limited land often seek out lower-lying areas to maximize sunlight and allow the tobacco to dry properly.

From an Islamic perspective, tobacco and cigarettes are often associated with haram goods because they contain mudharat (harm) for both health and the economy. However, according to Sheikh Ihsan Jampes, cigarettes are considered makruh (disliked) and are considered a valid comparison for other fatwas because Sheikh Ihsan Jampes' fatwa is representative of NU fatwas in general (Iswahyudi, 2020). This opinion is one of the reasons for choosing tobacco in this study when viewed from an Islamic perspective. In addition, the existence of tobacco as a seasonal crop that is a major source of livelihood in several areas is also an important reason for this study. A community leader in a village in Demak, Central Java, said that during the dry season, tobacco is the mainstay of farmers and currently, tobacco cannot be replaced by other commodities (Munif, 2020). However, providing for the family is an obligation. When the main source of income is not prohibited by all elements, and there are no elements that conflict with sharia, then it is still permissible. According to Humairoh (2021) in her research, the activities of growing and marketing tobacco are generally categorized as muamalah mubah in Islamic law (permissible economic activities). As long as the production and buying and selling processes are carried out fairly, transparently, and without deception, the practice does not conflict with sharia principles.

Central Java Province is one of Indonesia's tobacco suppliers. Central Java is the third-largest tobacco supplier in Indonesia after East Java and West Nusa Tenggara. This demonstrates the importance of tobacco in Central Java Province to the regional economy. Central Java's numerous mountainous

regions and vast agricultural and plantation lands make it a key production area for the agricultural and plantation sectors, including tobacco. The total area of tobacco plantations in Central Java in 2024 was 50,031.63 hectares, the second largest area after sugarcane for seasonal crops. Total tobacco production in 2024 reached 55,340 tons. This figure demonstrates the vital role tobacco plays in the economy of Central Java Province.

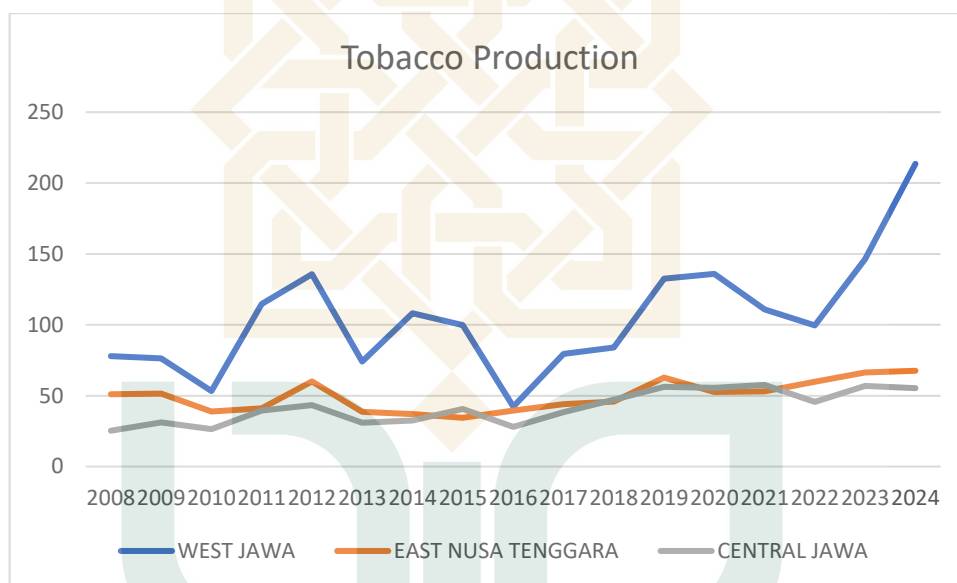


Figure 1.1 Tobacco Production Data for the 3 Largest Regions in Indonesia 2008-2024

Source: BPS Indonesia, processed (2025)

In addition to Central Java's contribution as one of the regions with large tobacco production, it is necessary to consider the characteristics of production fluctuations. Previous studies have stated that regions with more stable production dynamics allow for more accurate identification of macroeconomic relationships that are not biased by external shocks (Seok et al., 2024). This production stability is important in examining the influence of macroeconomic variables, as extreme output fluctuations can potentially mask the influence of macroeconomic variables on tobacco production. Central Java, with its

relatively stable tobacco production compared to the other two regions, was one of the reasons for selecting the observation area because it is able to represent the dynamics of tobacco production that is both large and structurally stable.

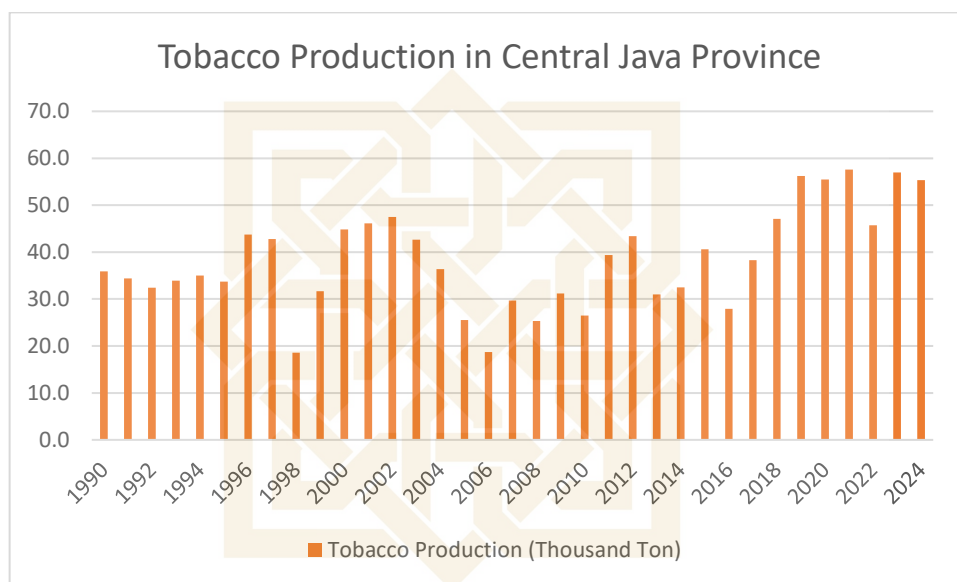


Figure 1.2 Tobacco Productivity Data for Central Java Province 1990-2024

Source: BPS Central Java, processed (2025)

Time-series data on tobacco production volume in Central Java Province from 1990 to 2024 show a clear pattern of volatility, with no dominant linear upward trend throughout the entire observation period. Tobacco production began with a strong volume of around 35,000 tons in 1990 and experienced a period of stable fluctuations in the range of 30,000 to 45,000 tons until 2005. Significant fluctuations are evident, with production reaching sharp lows in 1998 and 2006, when production volumes dropped drastically below 20,000 tons. After reaching a plateau in 2006, production showed a slow and fluctuating recovery until the mid-2010s, reaching another significant trough in 2016, when production volumes fell below 30,000 tons. However, after 2016, production showed a positive response and a strong upward trend towards the end of the

observation period. Production volumes surged sharply, reaching a peak phase lasting from 2019 to 2024. During this peak period, production consistently remained above 45,000 tonnes, reaching peak volumes seen in the range of 57,000 tonnes in 2020 and 2023. This high level of volatility and sensitivity indicates that the tobacco sub-sector is highly vulnerable to external shocks (including weather and policy factors), which justifies analyzing the determinants of macroeconomic factors in this study.

Conceptually, the phenomenon of output fluctuations in total tobacco production can be analyzed through the framework of Production Function Theory, rooted in the Cobb-Douglas production function model (Cobb & Douglas, 1928; Gujarati & Porter, 2009; Sukirno, 2016). Production theory posits that total output produced is a mathematical function of the interaction between physical inputs in the cultivation process and market incentives that guide the allocation of production factors. The agricultural sector possesses unique characteristics distinguishing it from manufacturing, such as reliance on seasonal cycles, absolute dependence on land as a growth medium, and high vulnerability to climatic conditions (Chebokchinova & Kapsargina, 2021). In the context of Central Java's tobacco commodity, variations in output are driven not only by supply-side capacities but also by signals from demand-side and price incentives.

The variable tobacco land area serves as the primary production factor (land input) establishing the maximum limit of supply capacity. Based on agricultural production theory, land operates as a fixed factor in the short run

that determines the upper potential bound of harvest yields (Mankiw, 2018; Soekartawi, 2003). Theoretically, expanding cultivated area increases the physiological capacity of crops to absorb nutrients and sunlight, thereby positively correlating with total tobacco production volume. This aligns with empirical agricultural research demonstrating that land area expansion and allocation optimization directly correspond to increased output volumes in seasonal crops (Ahmad et al., 2020; Suharyanto et al., 2021). However, in tobacco analysis, land allocation dynamics are heavily influenced by the ease of land conversion between crop types, as farmers continuously respond to profit expectations by adjusting planting areas at the onset of the growing season (R. Hasugian et al., 2023).

The variable tobacco selling price operates as a price incentive triggering economic responses from producers to determine optimal output levels. According to producer optimization theory, the local selling price received by farmers acts as the primary determinant of marginal revenue relative to marginal cost incurred (Gujarati & Porter, 2009). High selling price expectations or actual price increases for dried tobacco motivate farmers to expand farming scales through enhanced crop maintenance intensity or capital allocation (M. L. Purba et al., 2021). Conversely, price suppression resulting from tobacco excise tax (Cukai Hasil Tembakau) hikes or supply chain disruptions creates price disincentives that lead to delayed harvests, stock accumulation, and reduced production motivation at the farm level (Sabrina, 2022; Sodayani, 2024).

The variable number of tobacco farmers represents labor input driving all technical stages of cultivation. Within the production function framework, labor is a crucial variable input determining the efficient allocation of other inputs (Mankiw, 2018). The labor-intensive nature of tobacco farming—spanning nursery preparation, weeding, leaf harvesting, shredding (rajang), and sun-drying—makes the availability and participation of farmers and agricultural workers vital to physical productivity per hectare (R. Hasugian et al., 2023). Empirical labor economics studies in agriculture confirm that adequate labor quantity and working hour allocations exert a direct, significant impact on final crop yields, particularly in rural economies (N. A. Pratiwi et al., 2017b; R. K. Sitepu et al., 2024).

To date, existing literature has largely focused on the general role of agriculture in regional economic development (Ableeva et al., 2019; Chebokchinova & Kapsargina, 2021; Gollin et al., 2022), rural labor absorption (Pratiwi et al., 2017; Sitepu et al., 2024), and farmer household welfare (Agustina et al., 2021; Aminah & Ridho, 2024). Nevertheless, empirical research comprehensively modeling physical production inputs (land area and number of farmers) alongside market transmission conditions (selling price) on total tobacco production at the provincial level in Central Java remains limited.

This study fills this literature gap by examining the determinant factors influencing tobacco production in Central Java Province through an integrated Production Theory approach. By empirically analyzing the simultaneous and partial effects of land area, selling price, and the number of farmers on total

tobacco production, this research aims to provide evidence-based policy recommendations for agricultural policymaking, farmer protection mechanisms, and sustainable tobacco agribusiness development in Central Java.

B. Research Question

This study attempts to address the determinants of production tobacco agribusiness in Central Java Province, as well as a sharia economic perspective on tobacco agribusiness practices. The following is the research problem formulation:

1. How significantly does tobacco land area affect total tobacco production in Central Java Province?
2. To what extent does the tobacco selling price affect total tobacco production in Central Java Province?
3. How does the number of tobacco farmers influence total tobacco production in Central Java Province?
4. How do tobacco land area, tobacco consumption volume, tobacco selling price, and the number of tobacco farmers simultaneously affect total tobacco production in Central Java Province?

C. Research Purposes

The objectives of this research are as follows:

1. To analyze the partial effect of tobacco land area on total tobacco production in Central Java Province.

2. To evaluate the partial effect of the tobacco selling price on total tobacco production in Central Java Province.
3. To investigate the partial effect of the number of tobacco farmers on total tobacco production in Central Java Province.
4. To analyze the simultaneous effects of tobacco land area, tobacco consumption volume, tobacco selling price, and the number of tobacco farmers on total tobacco production in Central Java Province.

D. Benefits Of Research

1. Theoretical Benefits this research is expected to enrich studies in the field of macroeconomics and Islamic economics, by providing a deeper understanding of the causal relationship between macroeconomic factors on the Economic Performance of the specific commodity agribusiness sector.
2. Practical Benefits
 - a. Providing empirical and measurable guidance for the Regional Government (Central Java Province) in formulating policies that are responsive to external factors (macroeconomics) in order to maintain the stability and quantity of tobacco production.
 - b. To be a reference for tobacco farmers and related business actors regarding the importance of macroeconomic stability and sharia review in agribusiness practices to achieve sustainable prosperity.

E. Significance Of Study

The writing system used in this study is described in five chapters, as follows:

Chapter I Introduction, in this chapter consists of a background of the problem that contains issues and a brief explanation of economic growth in Indonesia and briefly explains the variables that affect it. This background is a reference for the formation of problem formulations, research objectives, research benefits and systematic discussion to provide research direction.

Chapter II Theoretical Basis, in this chapter contains a theoretical basis that explains the relationship between variables and the object of research. This chapter also contains a literature review containing relevant previous research, research framework, and hypothesis development.

Chapter III Research Methodology, describes the type of research used, variables and operational definitions of research variables, data and data sources, data collection techniques, and hypothesis testing methods.

Chapter IV Research Results and Discussion, the research method describes the type of research used, variables and operational definitions of research variables, population and samples, data and data sources, data collection techniques, and hypothesis testing methods.

Chapter V Closing, in this chapter contains an explanation of the research which contains conclusions on the research results, research limitations and suggestions for research.

CHAPTER V

CONCLUSION

A. Conclusion

Based on the results of the research conducted, the following conclusions were drawn:

1. Tobacco land area has a statistically significant positive effect on tobacco production in Central Java Province. The regression coefficient of 0.929052 indicates that a 1% expansion in cultivated tobacco land leads to a 0.93% increase in total tobacco production. Land serves as the foundational physical input in agricultural production, where increasing acreage directly expands plant capacity and physical harvest volumes across producing regencies.
2. Tobacco selling price has a non-significant negative effect on tobacco production in Central Java Province with a coefficient of -0.037189 and a p-value of 0.5858. The lack of statistical significance stems from the short-run inelastic nature of agricultural supply, where land allocation and planting decisions are finalized at the beginning of the season based on weather and capital availability long before market prices are established. Additionally, price formation dominated by industrial grading systems and oligopsonistic supply chain structures prevents price signals from serving as an immediate catalyst for production volume expansion.

3. The number of tobacco farmers has a statistically significant positive effect on tobacco production in Central Java Province. The elasticity coefficient of 0.091260 indicates that a 1% increase in the active tobacco farming workforce leads to a 0.091% increase in total harvest volume. Because smallholder tobacco farming remains inherently labor-intensive, human labor capacity is essential across all cultivation stages, from land preparation to selective manual harvesting.
4. Simultaneously, tobacco land area, tobacco selling price, and the number of tobacco farmers have a statistically significant effect on tobacco production in Central Java Province, with an F-statistic value of 281.2318 and a probability value of 0.000000. Collectively, all independent variables account for 96.24% of the variation in regional tobacco production (based on an Adjusted R-squared value of 0.962356), while the remaining 3.76% is influenced by other factors outside the empirical model, such as climate conditions and agricultural technological adoption.

B. Recommendations

This study offers several recommendations that may be considered for the future:

1. For policy makers and regional government: regional governments should prioritize the preservation and protection of productive tobacco agricultural land through spatial planning regulations to prevent productive land conversion. Furthermore, local authorities, in

coordination with the Ministry of Finance through the Tobacco Revenue Sharing Fund (DBH-CHT) program, should allocate resources toward post-harvest processing infrastructure, field training, and fair trading partnerships to protect farmers from price volatility and supply chain market power imbalances.

2. For practitioners and farmer groups: farmer groups are encouraged to strengthen institutional capacity, improve post-harvest handling, and adopt modern agricultural practices to increase crop quality standards required by cigarette manufacturers. Additionally, farmers should optimize labor utilization through collective field schools and consider sustainable farming techniques to enhance yield efficiency per unit of land.
3. For academicians and future researchers: future studies are expected to broaden the analytical scope by incorporating additional determinants of agricultural production, such as climate factors (rainfall patterns and humidity), fertilizer and pesticide input volumes, government subsidy distribution, and technological adoption rates. Furthermore, future research can expand the methodological framework.

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