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Analysis of the Determinants of the Agricultural and Trade Sectors on Economic Growth Rate

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ABSTRACT
Purpose: This research examines the effect of the agricultural and trade sectors on regional economic growth in Deli Serdang Regency from 2015 to 2024, using Gross Regional Domestic Product (GRDP) data.
Design/Methodology/Approach: A quantitative approach was applied using multiple linear regression models to analyze the relationship between the agricultural and trade sectors and regional economic growth. Data from the Deli Serdang Central Statistics Agency (BPS) were utilized, and the analysis was conducted with a focus on determining the contributions of these sectors to GRDP.
Findings: The results indicate that both the agricultural and trade sectors have a significant simultaneous effect on GRDP, with an R^2 value of 0.892, meaning 89.2% of the variation in GRDP is explained by the contributions of both sectors. The agricultural sector showed a statistically significant positive contribution, while the trade sector, though positive, did not have a statistically significant impact.
Practical Implications: The findings highlight the importance of sectoral synergy in driving inclusive and sustainable regional development. Effective strategies to integrate the agricultural and trade sectors can promote equitable economic growth.
Originality/Value: This study contributes to the literature on regional economic growth by providing empirical evidence of the simultaneous contributions of the agricultural and trade sectors, underpinned by Islamic economic principles, particularly the protection of wealth, distributive justice, and the pursuit of collective welfare.

Keywords: Agriculture, Trade, GRDP, Islamic Economics, Maqashid al-Shariah, Economic Growth, Deli Serdang.

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A. INTRODUCTION

In the dynamic modern economy, which continuously adjusts to the rhythm of the times, regional economic growth is no longer merely assessed by statistical figures (Harris, 2011). Instead, it is evaluated based on how far the growth can reach social justice and contribute to the formation of a sustainable development framework. Economic growth reflects the process of increasing the production capacity of goods and services within a region over a specific period (Mahmood et al., 2025). However, it carries a deeper philosophical meaning about collective welfare and the fulfillment of the community's rights. Indicators such as Gross Regional Domestic Product (GRDP), per capita income, and job creation are indeed essential, but without proportional benefit

distribution, their significance becomes skewed (MacFeely et al., 2024). In this context, fundamental sectors such as agriculture and trade must be examined simultaneously to uncover the extent of their contribution to development, not merely quantified by numbers but intertwined with moral values and social ethics (Islam, 2022). This perspective is deeply rooted in Islamic economic principles, which place distribution justice and balance as the core of all economic activities (Nurdiana et al., 2025). This reflection demonstrates that meaningful economic growth truly depends on the harmony between material progress and collective welfare. Therefore, the measurement of growth needs to be broadened to encompass the social dimensions, ensuring that it does not neglect the more essential aspects of social justice (Domingo-Martos et al., 2024).

Deli Serdang emerges as a rich economic landscape, serving as a mirror for the dynamic relationship between the agricultural and trade sectors within a dual framework of development: traditional and modern (Tobing et al., 2024). This region has a strong agrarian base, with rice fields covering an area of 30,889 hectares, which not only serves as a local food source but also sustains the livelihoods of thousands of farming households. Simultaneously, the trade sector in this area has demonstrated aggressive growth, marked by rapid digitalization and the influx of investments that open up numerous opportunities for distributing agricultural products to domestic and export markets. This interaction creates a significant synergy, but it also holds the potential for inequality, particularly when the distribution of profits disproportionately favors large economic players, leaving small farmers excluded from the fair value chain. This situation underscores the importance of a study that not only highlights growth figures but also examines its impact on social balance, which forms the foundation of Islamic economics (Athief et al., 2025). Emphasis on the value of collective benefit is crucial to ensure that growth does not belong to only a few parties. Thus, the involvement of all societal elements in the development process becomes an ethical foundation that cannot be overlooked.

Deli Serdang's economy presents a unique portrait, reflecting the dualism of development between the structurally established agricultural sector and the technologically progressive trade sector (Firmansyah & Raharja, 2025). Agriculture, with its vast land coverage and supportive social structure, remains a primary reliance for many rural families. On the other hand, trade is becoming increasingly dynamic, driven by infrastructure investments and technological penetration that accelerate the distribution of goods and expand market reach. Data from the Deli Serdang Central Statistics Agency (BPS) (2023) indicates that the agricultural sector still contributes 23.5% to GRDP, although signs of stagnation have emerged, indicating the need for innovation and structural strengthening. Meanwhile, the trade sector continues to grow, contributing 18.7%, supported by development policies that favor market efficiency and connectivity (Serdang, 2023). This situation presents a challenge in building alignment between two sectors with different characteristics, yet interlinked in shaping the region's economic map. In this context, equitable development must integrate the strengths of both sectors without creating disparities.

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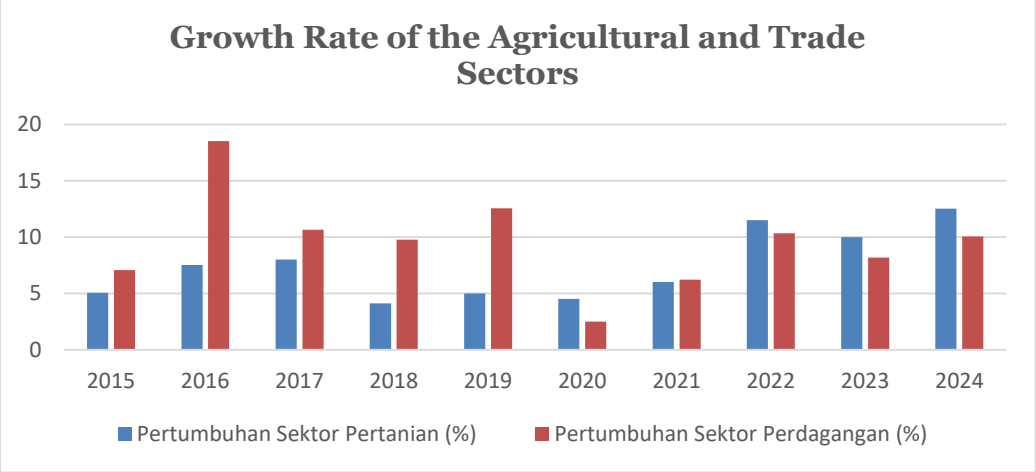

Figure 1. Agricultural Sector of Deli Serdang by Business Field

Source: Data processed by the author

Upon closer examination, the contribution of the agricultural and trade sectors to GRDP over the past five years shows dynamics that are not entirely linear. Data from the Central Statistics Agency (BPS) (2024) indicates that the agricultural sector has a relatively stable contribution pattern but has not experienced significant acceleration, while the trade sector shows a more noticeable growth rate during the same period (Indonesia, 2024). Based on the calculations, as shown in Figure 1, the trade sector has increased its contribution to GRDP from 7.07% in 2015 to 10.05% in 2024, while agriculture has gradually risen. This condition indicates a disparity in productivity and value-added, leading to unequal distribution of development results among economic actors. The agricultural sector tends to lag behind due to limited access to technology, market information, and adequate financing, whereas the trade sector adapts more quickly to economic transformation (Anderson & Ponnusamy, 2023). The growth trend graphs of each sector further reinforce this gap and serve as an important indicator in evaluating structural inequalities. This visualization provides evidence that growth is not necessarily equal, let alone just. Therefore, structural reforms cannot be postponed if an ideal sectoral balance is to be achieved

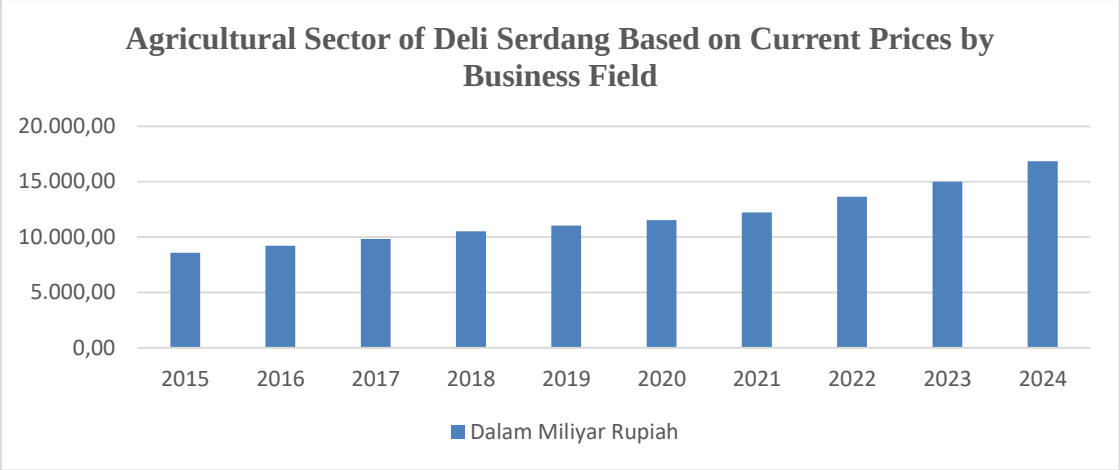

Figure 2. Agricultural Sector of Deli Serdang in Constant Prices by Business Field
Source: BPS Deli Serdang

The agricultural sector, despite having a strong structural foundation, is one of the most vulnerable sectors to external dynamics such as climate change and commodity price volatility(Bless et al., 2023). The resilience of this sector is further eroded due to the lack of innovation and limited access to efficient, environmentally friendly technologies. Research by Khatri emphasizes that the majority of farmers have not received adequate agricultural technology support, leaving production dependent on natural conditions and unpredictable planting seasons (Khatri et al., 2024). Another complexity arises from the weak farmer institutions, low access to microfinance, and the lack of research and development support tailored to farmers' needs. As a result, while the sector's contribution is high in statistical terms, its growth quality does not match that of other sectors that are more adaptive to change. Within the framework of justice-oriented development, this situation highlights the urgency of creating more inclusive and pro-farmer policies to ensure that agricultural growth does not fall behind the broader economic transformation (Deininger et al., 2022a). Here lies both the challenge and the opportunity to build sectoral justice from the grassroots.

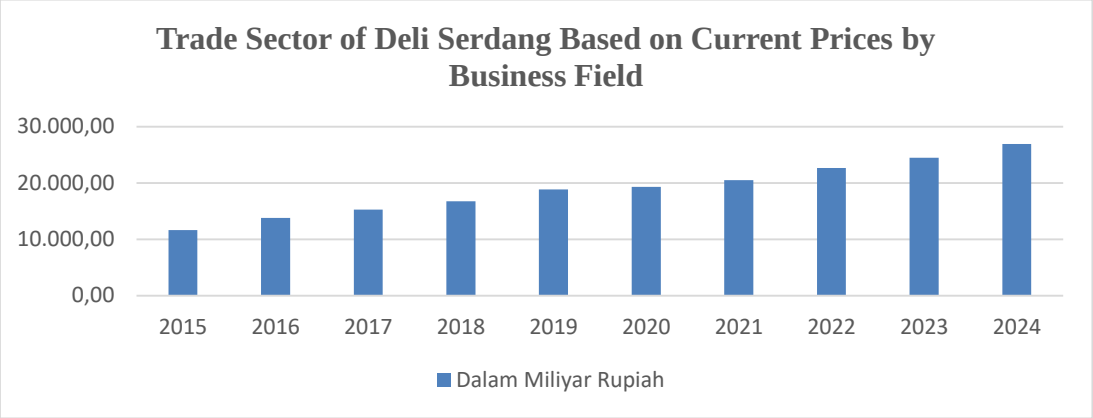

Figure 3. Trade Sector of Deli Serdang in Constant Prices by Business Field
Source: BPS Deli Serdang

In contrast to the agricultural sector, the trade sector demonstrates the ability to grow consistently and create new economic opportunities, particularly through digital channels and infrastructure expansion. Brueckner's analysis emphasizes that the development of logistics networks and the adoption of digital trade systems have been key catalysts for the transformation of this sector (Brueckner & Vespignani, 2021). In Deli Serdang, this development is reflected in the increase in export activities and the diversification of markets. However, the rapid growth of trade also raises questions about the extent to which the added value of this sector is felt by all economic actors. Often, high growth is concentrated in large-scale players and does not reach the middle or lower economic strata. In this context, the principle of justice in Islamic economics reminds us that meaningful growth is growth that can embrace all parties, create equal access, and ensure the sustainability of collective welfare (Lestari & Arumi, 2024). Therefore, it is crucial to redesign growth strategies to ensure that they are not only economically resilient but also sensitive to social structures.

The widening and deepening gap between the agricultural and trade sectors is not merely an economic issue, but also reflects a moral challenge in development design that neglects equality and justice. The agricultural sector faces many internal barriers, such as low technology adoption and inadequate institutional support, while the trade sector enjoys progress momentum due to supportive policies and a more flexible market structure. Research by Deininger indicates that policies not favoring farmers have created a structural gap in the distribution of development benefits (Deininger et al., 2022b). To address this, an approach is needed that is not only economic but also ethical, positioning humans as the primary subject of development, not just an object of growth statistics. In the spirit of *maqashid al-shariah*, good development is development that protects assets (ḥifẓ al-māl), strengthens the sustainability of life (ḥifẓ al-nafs), and maintains social balance across all economic activities(Karimullah, 2023; Zailani et al., 2022). Development that is measured but not inclusive will always lose its essence. Thus, ethics must be the foundation that guides every direction of development.

The development narrative in Deli Serdang serves as evidence that high-quality economic growth requires not only the right policy strategies but also a profound understanding of the social interconnections and values underlying economic activities. An evaluation of the contributions of the agricultural and trade sectors shows that development focused solely on GDP growth figures will never be sufficient to address the complex social challenges faced by society. By combining quantitative analysis with normative principles from Islamic economics, this research offers a more humane and balanced perspective. The principle of distributive justice becomes the primary foundation guiding future development, where every individual, whether a traditional farmer or a modern entrepreneur, has an equal right to benefit from the economic progress created collectively. The comparison graph of agricultural and trade sector growth trends also serves as an important visual and empirical complement to understanding this narrative. Therefore, ideal development is development that contains values, not just numbers. In this context, Deli Serdang provides a rich reflection space full of lessons.

B. THEORETICAL RESEARCH

The concept of economic growth within the Islamic framework is not merely concerned with increasing output or Gross Domestic Product (GDP), but also incorporates spiritual and social aspects as the main foundation for dignified development(Barom, 2013; Ben Jedidia & Guerbouj, 2020). According to Niekerk, the principle of *al-adl* (social justice) is the heart of the Islamic economic system, ensuring that the benefits of economic growth are not solely enjoyed by a few elites but must reach all segments of society. In this dimension, growth is not just about expanding production capacity but is also an instrument to achieve *falah*, which refers to well-being that encompasses both this world and the hereafter, as well as the overall improvement in quality of life. Unlike the conventional approach, which focuses on production efficiency and capital accumulation as measures of success, the Islamic approach mandates fair distribution mechanisms through instruments such as *zakat*, *infak*, and *sedekah* that are integrated into the economic system. These instruments are not supplemental but form an integral part of

Islamic fiscal policy, aimed at reducing economic disparities. Niekerk, further emphasize that the presence of this redistributive system ensures that vulnerable groups have access to economic resources, thereby creating social stability that supports sustainable economic growth (Niekerk, 2020). Hence, in the Islamic economic framework, economic growth is positioned as a process embedded with values, not merely a statistical process detached from moral dimensions ,(كوكران & (ضيف) 2022).

Islamic values in economic development do not stop at redistribution alone but also include ethical dimensions in investment and economic transactions. Practices such as *riba* (usury), *gharar* (speculation), and *maysir* (gambling) are strictly prohibited as they are seen to undermine a healthy and just economic order (Avdukic & Asutay, 2025; Kato, 2022). Instead, Islam encourages the use of Sharia-compliant contracts, such as *murabahah* and *mudharabah*, which promote transparency and trust in economic interactions. According to Nasution, this approach not only avoids unlawful practices but also fosters the integration of Islamic finance and the real sector, particularly in financing productive activities that are both halal and beneficial to society (Nasution & Nasutio, 2022). In the long term, this approach creates more robust growth as it is rooted in sustainability, not just from an environmental perspective but also from a human perspective(Kader, 2021). Extreme economic inequality, as explained in the literature, has the potential to cause social instability, which in turn hampers long-term growth. Therefore, controlling inflation, reducing poverty, and strengthening human capital are pillars of macroeconomic stability in the Islamic perspective, not merely the result of reactive monetary policies. The Islamic economic system positions humans as the main agents of growth, not just as objects of economic expansion (Athief et al., 2025; Furqani & Echchabi, 2022; Khawar, 2023). From this, the awareness emerges that ideal economic growth cannot be detached from moral and spiritual integrity.

The structural transformation framework in conventional development theory provides an important lens for understanding the dynamics of the agricultural and trade sectors' contributions to economic growth at the regional level (Gollin, 2023; Pinto et al., 2025). Arthur Lewis, in his dual-sector model, stated that economic development begins with the process of labor migration from low-productivity traditional agriculture to more productive modern sectors such as industry and services (Becker & Craigie, 2007). This process marks structural transformation, which eventually leads to a relative decline in the agricultural sector's contribution to GDP, although it remains important as a social safety net. In the context of Deli Serdang, the economy, which has been structurally dominated by agriculture, is now gradually shifting towards the dominance of the trade sector, as digitalization and infrastructure development facilitate the distribution process and expand market networks. Sadik-Zada adds that a key driver of economic modernization is the efficient utilization of natural resources and the adoption of technologies that are adaptive to contemporary market needs (Sadik-Zada et al., 2023). Recent data indicates that the trade sector is experiencing significant acceleration, while agriculture is relatively stagnant, as it has yet to optimally implement modern technologies that support productivity and efficiency. Therefore, the reality faced by Deli Serdang aligns with the pattern described by Lewis, where the modern sector becomes the primary driver of

growth, while the traditional sector requires policy intervention to avoid further widening the gap.

This structural transformation, as described by Lewis, is further reinforced through the economic growth stages theory developed by W.W. Rostow. In his theory, Rostow outlines five stages of economic development: from traditional society, pre-takeoff, takeoff, toward maturity, and mass consumption. At the pre-takeoff stage, the agricultural sector still dominates, but in the takeoff stage and beyond, the industrial and service sectors begin to take central roles in driving growth. In practice, the trade sector, which falls under services, symbolizes this shift, especially as consumption patterns change with rising incomes. Deli Serdang's economic structure, showing an increase in the trade sector's contribution and a relative decline in agriculture, can be said to be in this transition phase. Research by Sudaryanto corroborates this finding in the context of North Sumatra, where regional economic growth is largely supported by the expansion of non-agricultural sectors, especially services and trade (Sudaryanto et al., 2023). However, the agricultural sector remains strategically important due to its irreplaceable role in maintaining social stability and food security, particularly in the face of global economic turbulence. Therefore, equitable regional development requires serious investment in modernizing agriculture to ensure that the structural transition does not exclude agrarian communities.

Conventional development theories and Islamic economic principles can indeed be integrated into a single development narrative that not only pursues numerical growth but also pays attention to the social and spiritual integrity of society (Anjum, 2022; Yilmaz, 2024). While Lewis and Rostow emphasize the importance of the transition from agrarian to modern sectors to pursue efficiency and productivity, Islamic economics reminds us that this process must occur within an ethical and just framework. In this regard, sectoral transformation should not be an excuse to ignore structural inequalities or neglect vulnerable groups dependent on the agricultural sector. The complementarity of these two approaches can be a strength in crafting regional development strategies that are not only responsive to market dynamics but also sensitive to the values of social justice and economic inclusiveness (Naseemullah, 2023; Traugh, 2022). Therefore, sustainable development should not only be measured by statistical success but also by its ability to create an equitable and dignified living space for all elements of society. In this context, Deli Serdang serves as a rich space for reflection, offering valuable lessons in bridging material progress with the continuity of noble values. Development is no longer solely about infrastructure and investment but also about how humanity is valued in the entire process.

1. Economic Growth (Y)

Economic growth (Y) is the process of increasing the output of goods and services in a region sustainably (Acheampong & Opoku, 2023; Wang et al., 2022). In the context of regional development, the main indicator for measuring growth is Gross Regional Domestic Product (GRDP) at constant prices. GRDP reflects the gross value added from all economic activities in the region and serves as a key measure of evaluating the economic development performance of a region (Serdang, 2023). When GRDP rises year

after year, it indicates an increase in productivity, income levels, and the region's ability to efficiently manage its resources. Huda explains that GRDP growth is not just a quantitative indicator, but also reflects the effectiveness of regional government policies in stimulating economic activity (Huda et al., 2023). Through this approach, the contribution of each major economic sector to growth, particularly the agricultural (X1) and trade (X2) sectors, can be evaluated. Thus, focusing on these two sectors becomes highly relevant for detecting structural strengths and identifying opportunities for targeted economic acceleration in the region.

2. Agricultural Sector (X1) and Economic Growth (Y)

The agricultural sector (X1) is a fundamental part of the regional economy, particularly in agrarian areas such as Deli Serdang. Its contribution to GRDP is not only derived from the production of food commodities and industrial raw materials but also from job creation, food inflation control, and poverty reduction. Lubis found that local wisdom-based food security strategies in Deli Serdang have enhanced the agricultural sector's effectiveness in supporting the local economic structure and promoting farmer income stability (Lubis et al., 2025). Therefore, the role of agriculture should not be reduced to a mere subsistence sector, but rather as the primary driver of social and economic welfare. Classical development theory, such as Lewis's dual-sector model, places agriculture as a traditional sector with surplus labor that can be mobilized to the modern sector (Moloi & Marwala, 2020). This makes agriculture a source of "human capital" in structural transformation. Rostow also emphasized that the success of the "take-off" stage in national economic growth is highly dependent on the modernization of the agricultural sector (Rostow, 2000). In this context, the contribution of X1 to Y becomes significant, both directly through increased agricultural output and indirectly through the multiplier effects of farmer income on regional consumption.

3. Trade Sector (X2) and Economic Growth (Y)

The trade sector (X2) plays a strategic role in supporting economic growth (Y) as it functions as a link between production and consumption sectors. Trade activities drive the circulation of goods and services, create added value, and expand distribution networks, particularly for local agricultural products (Bounthone & Phouphet, 2023; Chen et al., 2022). The Ministry of Trade of the Republic of Indonesia notes that the trade sector is one of the largest contributors to GRDP in North Sumatra. The development of this sector has also contributed to the productivity of other sectors due to increased demand and market expansion. Tobing, state that in Deli Serdang, the trade sector acts as a synergistic partner for the agricultural sector in distributing harvests to domestic and regional markets (Tobing et al., 2024). This relationship strengthens the connection between X2 and Y, where trade expands the capacity for consumer consumption and creates an inclusive economic cycle. The multiplier effect of X2 on Y is also evident in this sector's ability to absorb labor across social strata and support the creation of locally-based MSMEs, all of which contribute to the aggregate increase in regional income.

C. METHODOLOGY

This research uses a quantitative approach aimed at analyzing the influence of the agricultural and trade sectors on the economic growth of Deli Serdang Regency from 2015 to 2024 (a 10-year time series data). The quantitative method was chosen because the study focuses on objective measurement and numerical data analysis to identify the relationships between economic variables (Yudita & Sugiyono, 2021). Secondary data used includes information on GRDP from the agricultural and trade sectors as well as factors affecting the rate of economic growth, sourced from the Central Statistics Agency (BPS) of Deli Serdang and other relevant official documents. The sampling technique employed is cluster sampling due to the large scope of the data. Data analysis is conducted using regression and correlation analysis methods to test the influence of the agricultural and trade sectors on regional economic growth. EViews is used as a tool to process the data, conduct hypothesis testing, and build an appropriate econometric model, ensuring that the research results reliably depict the economic dynamics of Deli Serdang.

To achieve the research objectives, secondary data is used as the primary source, covering information on the GRDP of the agricultural and trade sectors, as well as factors influencing the rate of economic growth in Deli Serdang from 2015 to 2024. This data is obtained from official sources, primarily the Central Statistics Agency (BPS) of Deli Serdang and other related documents that record the region's economic developments. Secondary data is chosen because of its structured nature, making it suitable for analyzing trends and patterns of economic growth over this period. The research uses cluster sampling to determine the sample, given the vast coverage of data, such as agricultural productivity, trade sector performance, and GRDP growth. The population for this study is based on data collected from reports published by the BPS of Deli Serdang concerning the agricultural and trade sectors, as well as GRDP growth. The sampling technique applied is purposive sampling, as this study focuses only on sectors deemed relevant to the research objectives. The sample consists of specific data regarding these two sectors over the period 2015–2024 with monthly data over 10 years, resulting in 120 observations. This study uses a multiple linear regression econometric model to analyze the effect of the agricultural sector (X_1) and trade sector (X_2) contributions on regional economic growth (Y) during the 2015–2024 period. The relationship between variables is formulated in the following equation:

$$Yt=\beta0+\beta1X1t+\beta2X2t+ut$$

Where (Yt) is the dependent variable, (\beta_0) is the constant, (\beta_1) and (\beta_2) are the coefficients, and (u_t) is the error term. Estimation is carried out using the Ordinary Least Squares (OLS) method with EViews, accompanied by classical assumption tests including normality (Jarque-Bera), heteroskedasticity (Breusch-Pagan), autocorrelation (Breusch-Godfrey), and multicollinearity (VIF) to ensure the validity of the model. Coefficient interpretation is done directly in percentage terms, for example, a 1% increase in the agricultural sector's contribution is projected to increase economic growth by (\beta_1%), with a significance level of 5%. This model was chosen because it can explain the simultaneous relationship between real sectors and regional economic growth in a quantitative and measurable manner. Data analysis in this research is

conducted using regression and correlation analysis methods, aiming to test the influence of the agricultural and trade sectors on economic growth (GRDP) in Deli Serdang. To process the data and build the econometric model, this study utilizes EViews software as a statistical analysis tool. Using EViews, the study can conduct hypothesis testing, sensitivity analysis, and model causal relationships between economic variables more accurately.

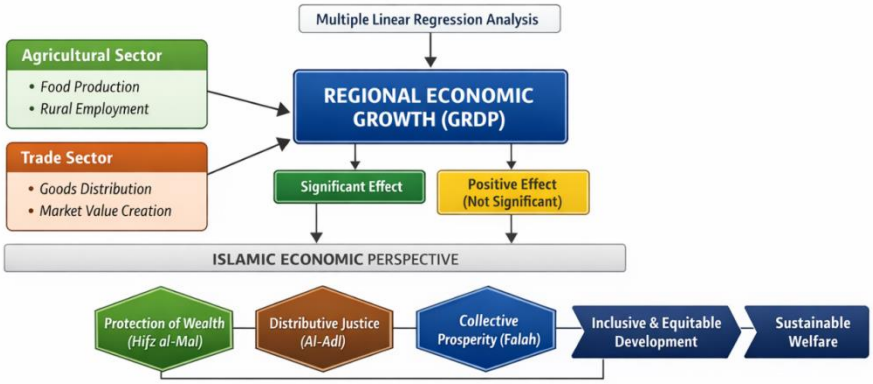

Figure 4. Conceptual Framework of Agricultural and Trade Sector Contributions to Regional Economic Growth

D. RESULTS

1. Normality Test

The normality test is conducted to ensure that the residuals in the regression model follow a normal distribution. One of the methods used is the Jarque-Bera test, implemented through the Histogram-Normality Test feature in the EViews software. This test examines whether the skewness and kurtosis of the residuals are consistent with a normal distribution. If the p-value from the Jarque-Bera test is greater than the significance level (usually 0.05), it suggests that the residuals are normally distributed, meaning the model meets the assumption of normality.

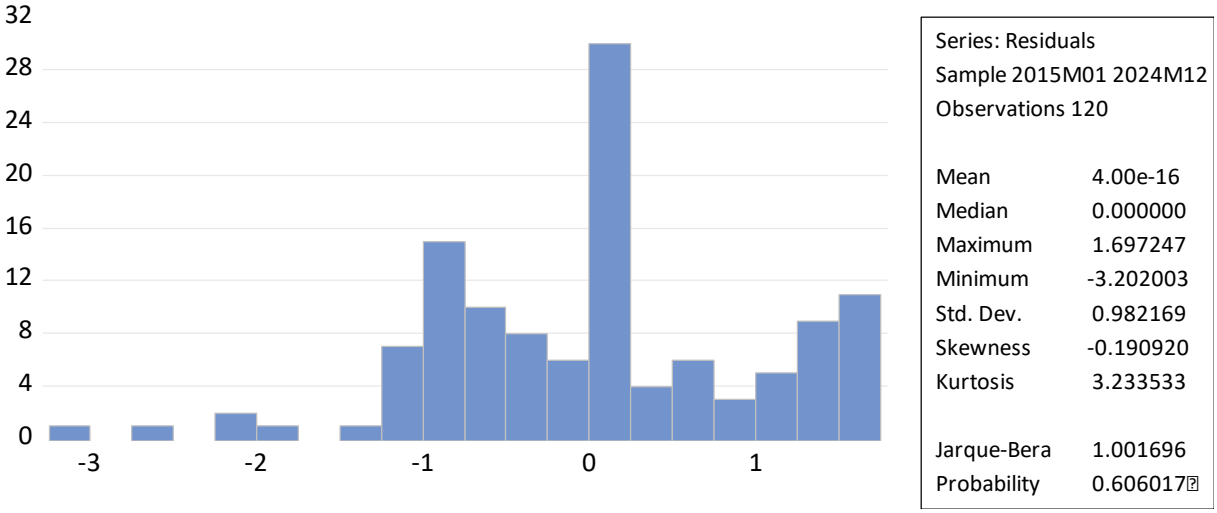

Figure 5. Normality Test

Source: Data processed with EViews 13

Based on the results of the test, the probability value obtained is 0.606017. Since this value exceeds the significance level of 0.05, it can be concluded that the residuals in the model are normally distributed.

2. Multicollinearity Test

The multicollinearity test is conducted to determine whether there is a strong linear relationship between the independent variables in the regression model. One of the ways to detect this is by examining the Variance Inflation Factor (VIF) values. If the VIF value for any of the independent variables exceeds a threshold (typically 10), it indicates the presence of multicollinearity, meaning the independent variables are highly correlated with each other, which may affect the reliability of the regression coefficients.

Table 1. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.244586	9.371184	NA
X1	0.008882	20.97832	2.281818
X2	0.002433	15.69289	2.281818

Source: Data processed with EViews 13

Based on the results of the multicollinearity test using EViews software, the VIF values for variables X1 and X2 are both 2.281818. Since both values are less than 10.00, it can be concluded that there is no multicollinearity issue between the independent variables in the regression model.

3. Heteroskedasticity Test

The heteroskedasticity test aims to determine whether the variance of the residuals is constant. One method used for this test is the Breusch-Pagan-Godfrey test, which examines the probability value of the Obs*R-squared statistic. If the p-value is greater than the significance level (usually 0.05), it indicates that the model does not suffer from heteroskedasticity, meaning the residuals have a constant variance. If the p-value is less than 0.05, it suggests that heteroskedasticity is present, and the model may require further adjustments.

Table 2. Heteroskedasticity Test

Heteroskedasticity Test: Glejser Null hypothesis: Homoskedasticity			
F-statistic	1.671257	Prob. F(6,112)	0.1345
Obs*R-squared	9.778757	Prob. Chi-Square(6)	0.1343
Scaled explained SS	7.996571	Prob. Chi-Square(6)	0.2384

Source: Data processed with EViews 13

The test results show a value of 0.1343, which is greater than 0.05. Therefore, it can be concluded that there is no heteroskedasticity, and the model satisfies the assumption of homoskedasticity.

4. Autocorrelation Test

The autocorrelation test is conducted to determine whether there is any correlation between the residuals in the regression model. Based on the Durbin-Watson test, a value of 1.323727 was obtained, which indicates positive autocorrelation. As a result, the test is continued using the Breusch-Godfrey Serial Correlation LM Test, which is a more general test for autocorrelation. This test helps to confirm whether the autocorrelation issue persists in the model.

Table 3. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.456226	Prob. F(2,5)	0.6577
Obs*R-squared	1.543272	Prob. Chi-Square(2)	0.4623

Source: Data processed with EViews 13

5. Multiple Linear Regression Analysis

Table 4. Multiple Linear Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.061373	0.015786	-3.887848	0.0002
X1	0.454073	0.048376	9.386353	0.0000
X2	0.511014	0.023378	21.85918	0.0000
R-squared	0.892740	Mean dependent var		0.001265
Adjusted R-squared	0.890890	S.D. dependent var		0.512475
S.E. of regression	0.169280	Akaike info criterion		-0.689643
Sum squared resid	3.324047	Schwarz criterion		-0.619581
Log likelihood	44.03377	Hannan-Quinn criter.		-0.661193
F-statistic	482.7397	Durbin-Watson stat		1.323727
Prob(F-statistic)	0.000000			

Source: Data processed with EViews 13

Based on the regression results above, using the OLS method, the equation can be formulated as follows:

$Yt = \beta 0 + \beta 1X1t + \beta 2X2t + ut$

Y=−0.061373+0.454073·X1+0.511014·X2

- The constant value (ccc) obtained is −0.061373-0.061373−0.061373, which means that if both independent variables increase by one unit simultaneously, the dependent variable (economic growth or GRDP) will decrease by −0.061373-0.061373−0.061373, assuming all other factors remain constant.
- The Agricultural Sector (X1) has a positive and significant effect on the GRDP of Deli Serdang. This means that for every 1 unit increase in the Agricultural Sector, the GRDP will increase by 0.4540730.4540730.454073 units, with a significance level of 0.0000 (which is highly significant).
- The Trade Sector (X2) also has a positive and significant effect on the GRDP of Deli Serdang. This means that for every 1 unit increase in the Trade Sector, the GRDP will increase by 0.5110140.5110140.511014 units, with a significance level of 0.0000 (which is highly significant).

6. t-Test (Partial Test)

The t-test is used to test the significance of each independent variable on the dependent variable individually in the regression model.

Table 5. t-Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.061373	0.015786	-3.887848	0.0002
X1	0.454073	0.048376	9.386353	0.0000
X2	0.511014	0.023378	21.85918	0.0000

Source: Data processed with EViews 13

Based on the t-test results:

- The variable (X_1) (Agricultural Sector) has a probability value of 0.0000 (< 0.05), meaning it has a significant partial effect on GRDP.
- The variable (X_2) (Trade Sector) also has a probability value of 0.0000 (< 0.05), indicating that it has a significant partial effect on GRDP.

7. F-Test (Simultaneous Test)

The F-test is used to test the significance of the regression model as a whole, i.e., to determine whether all the independent variables together have a significant effect on the dependent variable.

Table 6. F-Test (Simultaneous Test)

R-squared	0.892740	Mean dependent var	0.001265
Adjusted R-squared	0.890890	S.D. dependent var	0.512475
S.E. of regression	0.169280	Akaike info criterion	-0.689643
Sum squared resid	3.324047	Schwarz criterion	-0.619581
Log likelihood	44.03377	Hannan-Quinn criter.	-0.661193
F-statistic	482.7397	Durbin-Watson stat	1.323727
Prob(F-statistic)	0.000000		

Source: Data processed with EViews 13

Based on the results above, the probability value of the f-statistic is less than the alpha level of 0.05, specifically 0.000000 < 0.05, which means that the agricultural and trade sectors, together, have a significant simultaneous effect on GRDP.

8. Coefficient of Determination (R^2) Test

The coefficient of determination (R-squared) test is used to measure how well the regression model explains the dependent variable. The R^2 value indicates the proportion of variance in the dependent variable that is explained by the independent variables in the model. A higher R^2 value suggests that the model explains a larger portion of the variability in the dependent variable, indicating a better fit.

Table 7. Coefficient of Determination (R^2) Test

R-squared	0.892740	Mean dependent var	0.001265
Adjusted R-squared	0.890890	S.D. dependent var	0.512475
S.E. of regression	0.169280	Akaike info criterion	-0.689643
Sum squared resid	3.324047	Schwarz criterion	-0.619581
Log likelihood	44.03377	Hannan-Quinn criter.	-0.661193
F-statistic	482.7397	Durbin-Watson stat	1.323727
Prob(F-statistic)	0.000000		

Source: Data processed with EViews 13

Based on the results above, the Adjusted R-Square value is 0.892740, which means that the independent variables collectively explain 89.2% of the variation in the dependent variable. The remaining 10.8% is influenced by other variables outside the scope of this study.

E. DISCUSSION

1. Contribution of the Agricultural Sector (X1) to Economic Growth (Y)

The regression results confirm that the agricultural sector (X1) plays a significant role in influencing the regional economic growth (Y) in Deli Serdang. This is reflected in the positive regression coefficient of 0.454073 and a p-value of 0.000, which is far below the 0.05 significance threshold. This means that every one-unit increase in the agricultural sector leads to a direct increase in the GRDP of the region. This finding aligns with empirical evidence that Deli Serdang has several agrarian districts, such as STM Hilir, Pantai Labu, and Pagar Merbau, that still rely on primary commodities for their economic structure. More than just a matter of productivity, the agricultural sector also serves as a primary source of employment, local food supply, and an ecological stabilizer for the region.

The economic development model proposed by Lewis emphasizes that agriculture is the starting point for the transition to a modern economy. This view is supported by Rostow's development stages theory, which explains that early growth relies on surplus labor from agriculture. On the other hand, the Islamic perspective, through *maqashid al-shariah*, positions agriculture not only as a production tool but also as an instrument for preserving life (*ḥifẓ al-nafs*), protecting wealth (*ḥifẓ al-māl*), and achieving *falah* (collective welfare). Therefore, the agricultural sector's contribution extends beyond just statistics; it represents the social and spiritual structures embedded in the local economic identity.

Unfortunately, this significant contribution faces substantial structural barriers. One of the main issues is the low modernization of farming systems and limited access to Islamic finance. Many farmers still use conventional methods that do not add high value. In recent years, fluctuations in harvests have frequently occurred due to climate change and dependence on uncertain planting seasons. Market information asymmetry and weak bargaining power among farmers have caused profits to be concentrated among middlemen or large traders. Recent studies highlight that the lack of training, limited technology integration, and absence of continuous support have decreased the efficiency of this sector.

When these challenges are not addressed with a strategic and participatory approach, the agricultural potential will remain a passive asset in regional development. A systemic strategy is needed, involving the strengthening of farmer institutions, the development of irrigation infrastructure, and the creation of Sharia-compliant agribusiness schemes. This approach not only expands access to capital but also ensures the sustainability of production and distribution. In schemes like *musyarakah* (partnership) and *mudharabah* (profit-sharing), collaboration between farmers and Sharia cooperatives can enable the creation of shared value that is equitable and free from usury.

The fulfillment of the principle of justice (*al-'adl*) in agriculture is also closely related to the distribution of production results (Barolli & Miwa, 2022). Smallholder farmers and landless laborers should receive equal rights in the economic chain, not just provide cheap inputs. A tangible form of this justice is the strengthening of local agroindustry, which not only processes harvests directly but also distributes them through

channels controlled by the community. When agricultural products can be managed and marketed by the farmers themselves or Sharia-based cooperatives, the economic value-added remains at the village level, rather than being concentrated in urban centers.

The success of the agricultural sector also requires an entrepreneurial mindset and innovation that grows from within the community. Pan argue that innovative and productive competencies only develop in ecosystems that are open to learning and technology (Shrotriya et al., 2018). In this regard, districts such as Batang Kuis and Galang could serve as models for community-based agroindustry development, utilizing local potentials such as rice and chili. Through this pattern, not only does the economic value increase, but also the sense of collective ownership over the production and distribution systems.

If agricultural development is directed toward a holistic welfare mission, its contribution to economic growth will become more robust. Nasution emphasizes the importance of integrating the principles of *maqashid al-shariah* at every stage of development so that growth does not lose its spiritual and social direction (Nasution & Nasutio, 2022). Therefore, the relationship between the agricultural sector and GRDP (Y) is not merely numerical but also reinforces the moral foundation of the regional economy. When this sector is empowered with fair and ethical strategies, the transformation toward sustainable development will become increasingly tangible and have a broad impact.

2. Contribution of the Trade Sector (X2) to Economic Growth (Y)

The contribution of the trade sector to regional economic growth presents an intriguing dimension when analyzed in both empirical and normative contexts. According to the regression results, the trade sector (X2) has a positive coefficient of 0.511014 with a p-value of 0.000, indicating that its contribution to GRDP is statistically significant. This finding suggests that the dynamics of the trade sector over the past decade have had a tangible impact on the economic growth rate of Deli Serdang, although its contribution has been somewhat fluctuating in recent years. Upon further examination, these fluctuations reflect the trade sector's response to external changes such as the pandemic crisis in 2020, the acceleration of digitalization post-2021, and the recovery of household consumption leading up to 2024. As a link between the production and consumption sectors, trade plays a strategic role in creating added value, expanding distribution networks, and opening up wider market access for local economic players.

Geographically, trade in Deli Serdang is concentrated in densely populated districts such as Lubuk Pakam, Tanjung Morawa, and Percut Sei Tuan, where the growth of residential areas and infrastructure has spurred market expansion. The existence of traditional markets and wholesale centers provides crucial channels for local agricultural products, especially from agrarian districts like Beringin, STM Hulu, and Galang. In this context, the trade sector does not operate independently but acts as a catalyst that accelerates the circulation of the regional economy. Within the framework of equitable growth, the contribution of trade must also be assessed based on its capacity to absorb labor, foster entrepreneurship, and create cross-sector partnerships, especially with micro and small enterprises (MSMEs). According to local Trade Office data, over 72% of MSME actors in Deli Serdang are engaged in trade and services, indicating that the sector

is not just an economic driver but also a space for the economic participation of lower-income communities.

From an Islamic perspective, the trade sector holds high historical and spiritual value. The Prophet Muhammad SAW is known as an honest and fair trader, and trade activities are considered a form of social worship when conducted with principles of honesty (*ṣidq*), trustworthiness (*amanah*), and fair pricing. Thus, the contribution of the trade sector to economic growth is not only measured in quantitative terms but also in how it reflects the principles of *maqashid al-shariah* (Hermawan Adinugraha et al., 2023). The principles of *hifz al-māl* (protection of wealth) and *al-'adl* (justice) serve as ethical foundations for the Sharia-compliant trade system, which avoids usury (*riba*), hoarding (*ishterak*), and market exploitation. In the context of Deli Serdang, there is great potential for the sector to operate based on Islamic ethics, especially with the growth of Sharia cooperatives, halal markets, and murabaha contract schemes that are starting to be applied by some microfinance institutions. If implemented consistently, these schemes can broaden the contribution of the trade sector, not only in terms of GRDP but also in ensuring more equitable economic benefits.

However, structural challenges still plague the trade sector's contribution. Market access disparities, dominance by large distributors of primary goods, and the limited digital literacy among micro-entrepreneurs remain serious obstacles that hinder the sector's potential. A field survey conducted in 2024 found that only 37% of small traders in traditional markets have connected to digital platforms like e-commerce marketplaces or non-cash payment systems. The low penetration of technology has made local trade still heavily reliant on face-to-face interactions and conventional distribution methods, which are slow and inefficient. Additionally, weak supervision of product quality and fluctuations in the prices of essential goods lead to income instability for small business owners, especially during inflationary pressures. Within the framework of sustainable development, these weaknesses must be addressed through affirmative policies that empower small traders, strengthen cooperative institutions, and provide continuous digital literacy training at the district level.

In line with this, the trade sector needs to be reconstructed as a collective and collaborative economic system, rather than simply competitive. Models like *musyarakah* (partnership) or *syirkah* (joint venture) between traders, farmers, and social investors could serve to link the trade sector with the local production structure. The local government could facilitate the establishment of Sharia-based community markets where distribution, pricing, and transparency of information are collectively managed by local entrepreneurs. This aligns with the principle of *falah* in Islamic economics, which advocates for collective welfare based on active participation and collective responsibility (Dewi Samad & Sugeng, 2022; Karimah et al., 2025). If such models are successfully implemented, the contribution of the trade sector to economic growth will not only be reflected in statistical regressions but also in the improvement of the quality of life for Deli Serdang's community in a more equitable and sustainable manner.

In the context of development planning, the regression results showing the significant contribution of the trade sector need to be translated into concrete regional

policies. Interventions such as the restructuring of traditional markets, digital-based MSME training, and incentives for Sharia cooperatives can amplify the sector's impact on economic growth (Y). Empirical data has shown that the trade sector has high elasticity against macroeconomic variables such as income and consumption. Therefore, by strengthening the structure and systems within the trade sector, its contribution to GRDP will grow and stabilize. Moreover, this sector can also serve as a counterbalance in an economy that has long been heavily reliant on the primary sector. In other words, the trade sector becomes a bridge between production and welfare, between statistical data and social realities, between numbers and ethics.

3. Simultaneous Relationship between the Agricultural Sector (X1) and Trade Sector (X2) on Regional Economic Growth (Y)

In the past decade, the economic dynamics of Deli Serdang Regency have exhibited intriguing structural patterns when the two main sectors, agriculture and trade, are analyzed simultaneously within the framework of regional development. Based on the results of the multiple regression test, the coefficient of determination (R^2) is 0.892740, indicating that 89.2% of the variation in regional economic growth (GRDP) can be explained by the combined contributions of the agricultural sector (X1) and the trade sector (X2). This finding suggests that the interconnection between the two sectors has a very strong influence on macroeconomic achievements, emphasizing that a partial approach to sector development is no longer relevant. The performance of the agricultural sector, which is strong, requires efficient distribution, while the developing trade sector also needs stable and quality production resources. Therefore, the simultaneous contribution of these two sectors reflects a regional economic structure that supports each other and cannot operate in isolation.

One implication of this simultaneous relationship is the emergence of layered synergy between the agrarian sector and the distribution service sector, which in practice can be seen in the integration of traditional markets with local agricultural centers. In many districts, such as Galang, STM Hulu, and Beringin, farmers have formed informal partnerships with traders and micro, small, and medium enterprises (MSMEs) in the distribution of harvests. This relationship suggests that economic growth occurs not only at the level of production output but also within the social and economic networks formed among grassroots economic actors. Thus, regional development approaches need to shift their focus from merely strengthening leading sectors to integrating vertical and horizontal linkages between existing sectors. Here, the concept of "productive interdependence" becomes applicable, where the development of one sector has direct implications for the other, forming a more resilient and inclusive economic ecosystem.

Furthermore, the integration between the agricultural and trade sectors aligns closely with the values of *maqashid al-shariah* in Islamic economics. The principle of *falah* (collective welfare) cannot be achieved merely through the accumulation of GRDP figures but must be realized in the form of an equitable and participatory economic structure. In this regard, the simultaneous contribution of X1 and X2 can be optimized through collaborative policies such as Sharia-based farmer-trader cooperatives, microfinance using *mudharabah* contracts, and the joint management of distribution of

production by the community. This way, the principles of *al-ʻadl* (justice), *hifz al-māl* (protection of wealth), and *hifz al-nafs* (protection of life) can be institutionalized within the real economic system. In Deli Serdang, such an approach has started to emerge in the form of mosque-based cooperatives and the strengthening of halal distribution networks in districts like Lubuk Pakam and Patumbak, although still in the early stages. If expanded and reinforced through regional regulations, the simultaneous contributions of X1 and X2 will become a driving force for an economy based on ethics and spirituality.

However, the effectiveness of this simultaneous relationship still faces structural and institutional challenges. Disparities in market access, the dominance of large distributors in primary products, and the limited digital literacy among micro-enterpreneurs are significant barriers that hinder the potential of this sector. A 2024 field survey found that only 37% of small traders in traditional markets were connected to digital platforms such as e-commerce marketplaces or non-cash payment systems. The low penetration of technology has kept local trade highly reliant on face-to-face interactions and conventional distribution methods, which are slow and inefficient. Additionally, weak supervision of product quality and fluctuations in the prices of essential goods lead to income instability for small business owners, particularly during inflationary pressures. In the context of sustainable development, these weaknesses must be addressed through affirmative policies that empower small traders, strengthen cooperative institutions, and provide ongoing digital literacy training at the district level.

In line with this, the trade sector needs to be reconstructed as a collective and collaborative economic system, rather than merely competitive. Models such as *musyarakah* (partnership) or *syirkah* (joint venture) between traders, farmers, and social investors could serve to link the trade sector with the local production structure. The local government could facilitate the establishment of Sharia-based community markets where distribution, pricing, and transparency of information are collectively managed by local entrepreneurs. This aligns with the principle of *falah* in Islamic economics, which advocates for collective welfare based on active participation and collective responsibility. If such models are successfully implemented, the contribution of the trade sector to economic growth will not only be reflected in statistical regressions but also in the improvement of the quality of life for Deli Serdang's community in a more equitable and sustainable manner.

In the context of development planning, the regression results showing the significant contribution of the trade sector need to be translated into concrete regional policies. Interventions such as restructuring traditional markets, providing digital-based MSME training, and offering incentives to Sharia cooperatives can amplify the sector's impact on economic growth (Y). Empirical data has shown that the trade sector has high elasticity in relation to macroeconomic variables such as income and consumption. Therefore, by strengthening the structure and systems of the trade sector, its contribution to GRDP will grow and stabilize. Moreover, this sector can also serve as a counterbalance in an economy that has long been heavily reliant on the primary sector. In other words, the trade sector becomes a bridge between production and welfare, between statistical data and social realities, between numbers and ethics.

F. CONCLUSION

Over the past decade, the dynamics of economic growth in Deli Serdang Regency have demonstrated a strong interrelationship between the agricultural and trade sectors in the increase of Gross Regional Domestic Product (GRDP). The regression analysis results show that the agricultural sector contributes significantly to regional economic growth, with a positive coefficient and a p-value of less than 0.05. The trade sector also shows a positive and significant coefficient, although its contribution is more variable over time. Simultaneously, these two sectors explain 89.2% of the variation in economic growth, indicating that regional development is heavily influenced by the interaction between the production and distribution sectors.

These findings highlight that the success of regional economic development cannot be separated from the synergy between the agrarian sector, which provides output, and the trade sector, which acts as a bridge between production and consumers. When both sectors support each other in a balanced and just ecosystem, their impact is not only reflected in GRDP growth but also in the equitable distribution of welfare among the community. In the context of Islamic economics, this interaction aligns with the principles of *maqashid al-shariah,* particularly *hifz al-mal* (protection of wealth) and *al-'adl* (justice in distribution). Therefore, regional economic development should aim not only at growth but also at creating an economic structure that is fair, collaborative, and sustainable.

Empirical conditions in the field also show that the agricultural sector still absorbs most of the labor force in rural areas and plays a key role in food security, while the trade sector facilitates the transformation of added value through distribution networks and markets. The inequality in contributions that emerged in recent years, particularly during the pandemic and climate crises, underscores the importance of building systemic resilience based on justice, participation, and business ethics. From the perspective of Islam and sustainable development, regional economic success is the success of all sectors moving harmoniously in one shared development pulse.

The local government is expected to strengthen the agricultural sector through the modernization of production tools, the provision of Sharia-compliant financing, and the empowerment of farmer institutions to enhance productivity and increase its contribution to sustainable economic growth. In addition, the development of the trade sector should be directed toward an inclusive distribution system based on Sharia principles, such as the establishment of Sharia cooperatives and the application of murabaha contracts, in order to promote fairer market access for micro-enterprises and farmers. Furthermore, synergy between the agricultural and trade sectors needs to be institutionalized and supported by appropriate policies so that regional economic growth not only improves quantitatively but also reflects distributive justice and aligns with the principles of maqashid al-shariah.

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