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Baseline Indicator for Program Evaluation: Case Study of Millennial Farmer Program in West Java Province

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A B S T R A C T

The design of a policy or program evaluation study is both descriptive and analytical. On the one hand, evaluators try to describe what has happened, and on the other hand, try to explain why it happened. To do this, evaluators need to observe what happens before and after the policy or program is implemented. This research aims to describe phenomena related to the agricultural sector in West Java Province before the millennial farmer program was implemented in 2021. Such knowledge will be useful as baseline indicator when assessing the program's performance and impact. This research uses a qualitative approach with a case study design and a literature study review. The data source used is secondary data in the form of previous study and statistical data obtained from the Central Bureau of Statistics (BPS). The results showed that there were six empirical phenomena that described the condition of the West Java agricultural sector before the millennial farmer program was implemented, namely the percentage of young farmers that continued to decline, the low average wage of agricultural workers, the deficit exchange rate of farmers (NTP), the structure of the agricultural sector workforce that shifted towards non-agriculture, the contribution of the agricultural sector to GRDP that decreased, and the position of agriculture as a lagging business sector according to the results of Klassen analysis. These six phenomena can be used as baseline indicators to assess program performance and impact in the next five or ten years.

INTRODUCTION

This research will discuss the condition of the agricultural sector in West Java Province before the millennial farmer program was implemented. In 2021, the West Java Provincial Government implemented the millennial farmer program. This program aims to attract millennials aged between 19 and 39 to work in the agriculture, fisheries and forestry sectors to encourage the regeneration of farmers in West Java. Knowledge of the conditions before the program was implemented will be useful as a baseline indicator when an evaluation is conducted to assess the performance and impact of the program through comparison with the conditions that occurred afterwards. Evaluation conclusions will be stronger and more convincing if they are based on comparing conditions before and after the program or policy is implemented (Finsterbusch and Motz in Wibawa et al., 1994: 74).

Agriculture is one of the business sectors that plays an important role in human life. The contribution of the agricultural sector determines the achievement of the second Sustainable Development Goals (SDG's), namely eliminating hunger, achieving food security and good nutrition, and increasing sustainable agriculture (Bappenas, 2022). In Indonesia, the agricultural sector is the second largest contributor to Gross Domestic Product (GDP) as well as the driver of national economic growth (BPS, 2022). However, Indonesia is currently faced with the problem of farmer regeneration, with fewer and fewer young people working in the agricultural business sector, including in West Java Province.

The number of young farmers in West Java Province has continued to decline over the past 10 years. Based on data from the Central Bureau of Statistics of West Java Province, the number of young farmers decreased from 39.35% in 2011 to 25.72% in 2020 (Handayani & Partinah, 2012; Sutopo, 2021). On the other hand, the number of old farmers increased from 60.65% to 74.28% in the same period.

The declining number of young farmers is not the only condition that reflects the problem of farmer regeneration in West Java. The low average wage of workers in the agricultural sector, the unideal exchange rate of farmers, the shift of the labor structure from agriculture to non-agriculture, the declining contribution of the agricultural sector to GRDP, and the lagging of the agricultural business sector are conditions that encourage the low interest of the younger generation to work in the agricultural sector. All of these conditions will be elaborated in the results and discussion section.

The millennial farmer program is expected to change the image of agriculture to modern as well as provide a way for young people in West Java to start an agricultural business. To achieve this, program participants receive services in the form of providing business land, opening access to capital, mentoring start-up businesses, and providing off-takers for marketing. In addition, program participants are also involved in training and technical guidance activities both related to agricultural aspects, such as land management, fertilization, cultivation and feed processing; as well as supporting aspects such as financial management, and the use of information and communication technology facilities for managing and marketing business results (Jawa Barat, Peraturan Gubernur No. 25 Tahun 2021).

The millennial farmer program is certainly expected to solve the problem of farmer regeneration which has a positive impact on the sustainability of the agricultural business sector, food security and independence, and regional and national economic growth. However, even if a policy or program is designed as well as possible to achieve its goals, these expectations are not always

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realized (Smith & Larimer, 2009: 129). For this reason, it is necessary to evaluate the impact of the program, which can determine the extent to which a set of directed human activities (the program) affects the state of some objects or phenomena (the observed results) (Mohr in Smith & Larimer, 2009: 130).

Finsterbusch and Motz (Wibawa et al., 1994: 74-76) mention four types of evaluations based on the strength of the conclusions they draw. First, single program after-only which bases the conclusion of program performance only by looking at the condition of the target group after the program runs. The information obtained from this evaluation is the state of the target group. Second, single program before-after which draws conclusions on program performance based on comparing the condition of the target group before and after the program was implemented. This type of evaluation will generate information about changes in the target group. Third, comparative after-only, which draws conclusions about program performance by comparing the conditions of the target group and the control group after the program is implemented. The information obtained through this type of evaluation is the state of the target and non-target groups. Fourth, the most ideal, comparative before-after which draws conclusions on program performance by comparing the conditions between the target group and the control group both before and after the program is implemented. This type of evaluation will generate information on the impact of the program on the target group. Therefore, it is very important to know the conditions that influence the making of a policy/program before the program is implemented.

In addition to describing the condition of the agricultural sector in West Java before the millennial farmer program was implemented, this study also presents the results of field research in the context of evaluating the implementation of the millennial farmer program in West Java Province in the period 2021 to 2022, especially in the aspect of administrative processes, as one of the targets of the process-focused evaluation developed by Marvin C. Alkin. Process-focused evaluation is an evaluation that focuses on how the program is implemented, and includes three targets: administrative process, implementation process, and program mechanism process (Alkin & Vo, 2018: 163-165). Administrative process evaluation involves the program input components (resources) needed to implement the program, such as human resources, program implementation guidelines, facilities, financial resources, and program participants (Alkin & Vo, 2018: 167-169).

Many previous studies have evaluated government intervention initiatives to regenerate farmers. These studies aim to assess the effectiveness and impact of interventions (objective-based evaluation) that provide assistance for young people to enter agriculture, such as those conducted by (Davis et al., 2013a; Gkatsikos et al., 2022; Jansuwan & Zander, 2021; Pavić et al., 2020). The evaluations applied by these researchers are mostly single program after-only or comparative after-only.

From the background description, the research question is: what are the empirical phenomena that can describe the condition of the agricultural business sector in West Java before the millennial farmer program was implemented, and can be used as a baseline indicator to evaluate the impact of the program? To answer this, in the next section, the factors that hinder farmer regeneration will be reviewed in the context of West Java Province as a case study object.

METHOD

This research uses a qualitative approach with a case study research design. Qualitative research is used to explore, obtain in-depth data, and understand the true meaning behind the data that appears on the surface (Creswell & Creswell, 2018: 43). Case studies provide further learning, discovery, or problem solving, and can describe the entire situation or process holistically and allow the incorporation of various perspectives or points of view (Neuman, 2014: 42). The data used are primary and secondary data. Primary data was obtained through interviews with millennial farmer program officers/ implementers in West Java Province and observation. While secondary data used in the form of literature review from previous studies. In addition, the secondary data used came from the Central Bureau of Statistics of the Republic of Indonesia (BPS), including reports on the results of the 2003 and 2013 Agricultural Census (*Sensus Pertanian*), the 2018 Intercensus Agricultural Survey (*Survey Pertanian Antarsensus*), the National Labor Force Survey (*Survey Angkatan Kerja Nasional/Sakernas*), the State of the Labor Force in Indonesia 2010-2020 (*Keadaan Angkatan Kerja di Indonesia*), Income Statistics, and GRDP of West Java Province.

Information from the literature review was used to identify factors inhibiting farmer regeneration in various countries. These factors are applied in the context of West Java Province as a case study object, complemented by statistical data sourced from BPS. Furthermore, these factors are used as baseline indicators of agricultural conditions before the millennial farmer program is implemented. Further analysis and explanation are based on the baseline indicators that have been determined.

RESULTS AND DISCUSSION

Litterature Review: Farmer Regeneration Barrier

Based on the results of the National Labor Force Survey (Sakernas) by the Central Statistics Agency (BPS), the number of farmers aged less than 40 years in Indonesia decreased from 47.14% in 2011 to 35.80% in 2020. Meanwhile, the number of farmers aged 40 years and above in the same period increased from 52.86% to 64.20%. This is a common phenomenon of demographic structure change found in many countries (Susilowati, 2016).

Based on literature review studies, apart from Indonesia, the phenomenon of farmer aging also occurs in countries in the Americas and Europe (Carbone & Subioli, 2011; Coopmans et al., 2021; Garcia-Alvarez-Coque & Piñeiro, 2022; Leonard et al., 2017; Liontakis et al., 2021; May et al., 2019; Nipers & Pilvere, 2020; Sroka et al., 2019; Zagata et al., 2015; Zagata & Sutherland, 2015; Żmija et al., 2020), Africa (Ariyo & Mortimore, 2012; Kadzamira & Kazembe, 2015), and Asia (Chuang et al., 2020; Jansuwan & Zander, 2021; Mucharam et al., 2019; Nandi et al., 2022; Palacios, 2005; Phiboon et al., 2019; Rigg et al., 2020; Widhiningsih, 2020).

The phenomenon of declining numbers of young farmers is driven by income disparities between workers in the agricultural and non-agricultural sectors (Attavanich, 2016; Susilowati, 2016; Watanabe et al., 2009). In addition, agriculture also faces many challenges, such as market and product price volatility, increasing production costs, declining soil quality, climate change, and natural disasters (Attavanich, 2016), and limited average land tenure (Pechrová et al., 2018; Susilowati, 2016) due to the conversion of agricultural land into settlements (Rahman et al., 2020), toll road infrastructure and integrated industrial areas (Mufariq et al., 2022). Agricultural work is also physically

and mentally exhausting, with a greater likelihood of occupational accidents (Hounsome et al., 2012; Rittirong et al., 2014).

These factors make farming an unattractive career path for young people. Higher levels of education lead to changes in young people's lifestyles and occupational choices, along with increased opportunities to seek off-farm employment (May et al., 2019; Rigg et al., 2020). Highly educated rural youth will migrate to urban areas, contributing to the problem of rural and agricultural exodus (Maïga et al., 2020; Wehantouw et al., 2018; White, 2020; Young, 2013).

Migration also has an impact on shifting economic structures. Ravenstein (1885), Todaro (1976), and Speare (1975) in (Yuniarvi et al., 2017: 13-14) suggest several factors driving population migration in the productive age group, namely economic factors related to employment opportunities and higher wages in other areas, structural factors such as socio-demographic characteristics, level of satisfaction with residence, geographical conditions of the area of origin, and community characteristics. For example, people in areas where agricultural land is barren will usually look for work in other places that are more fertile or have more economic opportunities, especially in the non-agricultural sector, such as industry, trade and services.

Agriculture Sector Advantage

Despite the problem of farmer regeneration, the agricultural sector has consistently contributed an average of 13.21% to GDP as well as driving national economic growth over the past five years. This value is below the manufacturing industry and wholesale and retail trade sectors, which contribute an average of 21.91% and 13.72% to GDP respectively (BPS, 2022).

During the Covid-19 pandemic, which had a significant impact on the national economy, the agricultural sector performed quite well. This is evidenced by the positive growth experienced by the agricultural sector, which amounted to 1.77 percent (amid a decline in the Indonesian economy of -1.59 percent in 2020) and continued to grow positively by 1.84 percent in 2021. Among the five business sectors contributing the largest GDP contribution, only the agriculture sector experienced growth during 2020 (see Table 1).

Table 1. Performance of the Five Largest Contributing Business Sectors to GDP in 2020

No.	Business Sectors	Growth / Decline
1	Manufacturing Industry	-2,93%
2	Wholesale and Retail Trade; Repair of Cars and Motorcycles	-3,78%
3	Agriculture, Forestry and Fisheries	1,77%
4	Constructions	-3,26%
5	Mining and Quarrying	-1,95%

Source: BPS, 2022 (processed)

In addition, the agricultural sector can still absorb a lot of labor, although the percentage is decreasing over time. Table 2 shows that the agricultural sector absorbed an average of 30.2 percent of the labor force over five years, although it showed a downward trend. In 2016 the agricultural sector was able to absorb almost 32 percent, but fell to below 29 percent in 2019. In 2020, the percentage increased again by 2.2 percent, which according to (Sdgadmin, 2020) is an anomalous condition while proving that the agricultural sector is relatively flexible to the Covid-19 pandemic.

These strategic roles further emphasize the importance of agriculture, as expressed by Ningrum (2011: 200), that agriculture has a large and diverse resource potential, has a sizable share of national income, is a place where the population depends on, and is the basis for growth in rural areas.

However, if the number of young farmers continues to decline, leaving only older farmers who face increasing workloads and agricultural risks, agricultural sector competitiveness, sustainability, and national food security are likely to be challenged in the future (Jansuwan & Zander, 2021; Zagata & Sutherland, 2015). This is because older farmers are generally less motivated to develop agriculture, less open to new ideas and efficient methods, less willing to take greater risks, and less prepared to develop agricultural businesses using borrowed capital (Hamilton et al., 2015; Morais et al., 2017). On the other hand, young farmers are recognized as playing an important role in facing the challenges of food security and global warming (Davis et al., 2013; Vanslembrouck et al., 2002).

Table 2. Percentage of Indonesian Workers by Economic Sector 2016 - 2020

Economic Sectors	2016	2017	2018	2019	2020
Agriculture	31,9	29,7	30,0	28,6	30,8
Industry	21,4	22,2	22,0	22,3	20,5
Services	46,7	48,1	48,0	49,1	48,7
Jumlah	100,0	100,0	100,0	100,0	100,0

Source: (Irawan et al., 2021: 45)

There have been examples of policies and programs created in several countries to attract young people to work in the agricultural sector. European countries implement the Common Agriculture Policy (CAP). In the CAP, there is a "Setting up of Young Farmer" program that aims to encourage the younger generation to start a business in the agricultural sector through the provision of capital assistance that must be returned in installments within a certain period. In addition, the "Early Retirement Scheme" program was developed to encourage elderly farmers to retire early and provide access to younger successors with compensation in the form of a 10-year pension. Finally, the "Young Farmer Payment" program aims to encourage farmer regeneration by providing direct payments to young farmers (no more than 40 years old) who are first-time or have been farming for five years (Zagata & Sutherland, 2015). Meanwhile, in low- and middle-income countries, interventions are mostly provided in the form of non-financial assistance, such as training related to agricultural and entrepreneurial aspects, technical guidance, field practice, training in the use of information technology in agriculture, and so on (Maïga et al., 2020).

The millennial farmer program in West Java provides various non-financial interventions, such as the provision of farmland, provision of supporting facilities and infrastructure, implementation of business start-up technical guidance, and various assistance efforts for access to capital, the farming start-up process, and marketing of farming products.

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Phenomena and Conditions of the Agricultural Sector in West Java Province before the Millennial Farmer Program was Implemented.

Declining Number of Young Farmers

Based on BPS data, the number of farmers in West Java Province in 2021 was 3.5 million people. Of this number, 924 thousand (26.38%) are under the age of 40. The remaining 2.5 million (73.62%) are over 40 years old as shown in Figure 1. The phenomenon of declining numbers of young farmers in West Java Province confirms a problem in the regeneration process of farmers which, if not immediately intervened, will threaten food security and self-sufficiency in the future.

According to (Susilowati, 2016), the continued decline in the number of young farmers is due to changes in the demographic structure that are less favorable to the agricultural sector. The younger generation is reluctant to work in the agricultural sector because of its less prestigious image and lack of adequate rewards. The education factor is also a driver of youth reluctance to work in the agricultural sector. Young people with higher education tend to choose jobs that are more prestigious and provide greater income outside the agricultural sector (Maïga et al., 2020; Wehantouw et al., 2018; White, 2020; Young, 2013).

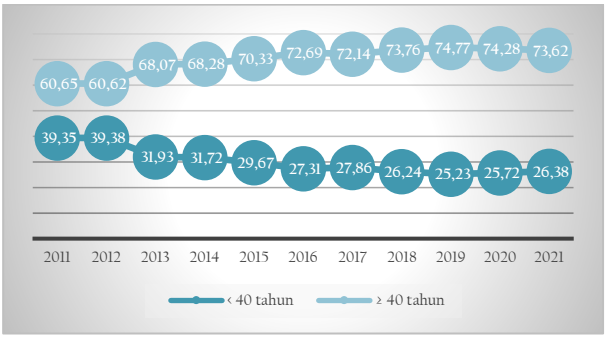

Figure 1. Percentage of Farmers in West Java by Age (Labor Force Survey in West Java Province, BPS, 2011 - 2021, processed)

Low Average Wages of Agricultural Laborers

According to (Attavanich, 2016; Susilowati, 2016; Watanabe et al., 2009), the phenomenon of declining numbers of young farmers is driven by income disparities between workers in the agricultural and non-agricultural sectors. Based on the Sakernas results in August 2021, laborers working in the agricultural business sector received an average wage of IDR 1.97 million per month. This wage value is in the second lowest position out of 17 sectors, above the other business and service sectors. The highest wage was earned by workers in the mining and quarrying business sector, at IDR6.9 million per month, followed by workers in the information and communication business sector, at IDR5.3 million per month (see Figure 2).

Still related is the less prestigious and less well-rewarded image of agriculture, encouraging the migration of highly educated youth to cities and leaving behind less educated agricultural workers (Maïga et al., 2020; White, 2020). Ultimately, the bargaining position for high wages becomes less favorable.

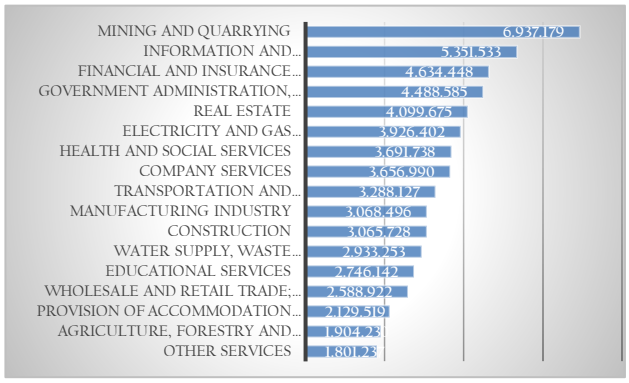

Figure 2. Average Labor Wages by Employment Field as of August 2021 (BPS 2021, processed)

Unideal Farmer Exchange Rate and Farm Business Exchange Rate.

The Farmer Exchange Rate (*Nilai Tukar Petani*/NTP) and the Agricultural Business Exchange Rate (Nilai Tukar Usaha Pertanian/NTUP) are often used as measures of farmer welfare. Referring to BPS, NTP is the ratio between the price index received by farmers (It) and the price index paid by farmers (Ib). NTP and NTUP above 100 indicate that farmers are experiencing a surplus, equal to 100 means break-even, and below 100 means farmers are experiencing a loss/deficit.

The uses and benefits of NTP are:

a. From the Price Index Received by Farmers (It), it can be seen the price fluctuations of goods produced by farmers. This index is also used as supporting data in the calculation of agricultural sector income.
b. From the Price Index Paid by Farmers (Ib), it can be seen fluctuations in the prices of goods consumed by farmers who are the largest part of the community in rural areas, as well as fluctuations in the prices of goods needed to produce agricultural products. The development of Ib can also illustrate the development of inflation in rural areas.
c. NTP is useful for measuring the exchangeability of products sold by farmers with products needed by farmers in household production and consumption.
d. The NTP figure shows the level of competitiveness of agricultural products compared to other products. On this basis, efforts to specialize products and improve the quality of agricultural products can be made.

Although it has a number of uses and benefits, NTP is also considered to have shortcomings because NTP is calculated from the ratio of the price index received by farmers to the price index paid by farmers, which includes all farm household expenses including production costs, schooling, medical treatment, buying clothing, shelter and others so that it does not reflect the real expenditure of the business. As a response to the weakness of the NTP, the NTUP indicator is also used where the ratio of the price index received by farmers from agricultural businesses is compared with the price index paid by farmers for agricultural business expenses (Hendriadi, 2016).

Table 3. shows that the combined NTP and NTUP in West Java Province in 2021 has a value below 100, which means that farmers experience a loss or deficit.

Table 3. Annual NTP and NTUP Year 2021

Agriculture Subsectors	NTP	NTUP
Food Crops	96,94	98,14
Horticulture	102,29	102,43
Smallholder Plantation Crops	95,18	96,31
Livestock	96,77	95,25
Fisheries	107,97	109,12
Combined	97,84	98,56

Source: BPS West Java Province, 2022

Shift of Agricultural Labor Structure to Non-agriculture

The agricultural sector in West Java still absorbs quite a lot of labor, although in a downward trend every year. As shown in Figure 3, the agricultural sector was able to absorb 16.43% of the labor force in 2016, but continued to decline until 2019 at 13.25%. During this period, there was an increase in labor absorption in the industry and trade sectors, while the services and other sectors tended to be stable. This means that there was a shift in the structure of labor from the agricultural to non-agricultural sector in 2016 - 2019.

This phenomenon supports the statements of Ravenstein (1885), Todaro (1976), and Speare (1975) in (Yuniarvi et al., 2017: 13-14) that migration driven by economic factors, such as employment opportunities and higher wages in other areas, structural factors such as socio-demographic characteristics, level of satisfaction with residence, geographical conditions of the area of origin, and community characteristics, has an impact on shifting economic structures. Residents in areas where agricultural land is barren will usually seek work in other places that are more fertile or have more economic opportunities, especially in the non-agricultural sectors, such as industry, trade and services.

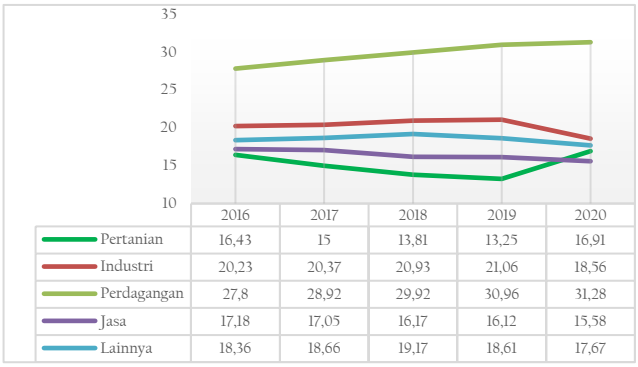

Figure 3. Percentage of Labor Absorption in West Java Province by Business Sector 2016 - 2020 (Source: BPS Jabar, 2016 - 2020).

Declining Contribution of Agriculture Sector to West Java GRDP.

From 2010 to 2020, the agricultural sector in West Java contributed an average of 8.27% to GDP. This value is the fifth largest of all provinces in Indonesia, and is below East Java Province (13.45%), Central Java (9.77%), Riau Province (9.61%), and North Sumatra Province (9.56%) (bps.go.id, 2022). However, the trend of the contribution of the agricultural sector to West Java's Gross Regional Domestic Product (GRDP) has tended to decline since 2010 (see Figure 1.6).

From Figure 4, it is known that the contribution of the agricultural sector to West Java's GRDP has continued to fall since 2010 by 9.83% until 2019 to 7.02%. This value briefly increased by 0.34% in 2020 before falling again in 2021 to 7.19%.

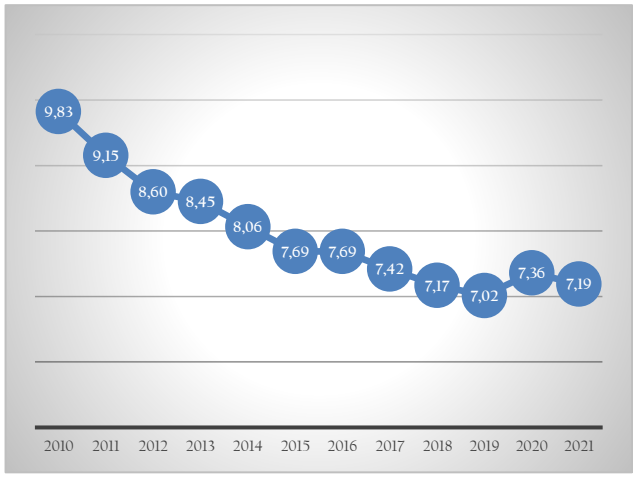

Figure 4. Percentage Contribution of Agriculture Sector to West Java GRDP. Source: jabar.bps.go.id, 2022 (processed)

Lagging Agricultural Business Sector

Agriculture in West Java Province is the most underdeveloped business sector. This conclusion is based on the calculation of the rate of GRDP and the contribution of each business sector to the total GRDP of West Java Province in 2015 - 2019 at constant prices. Furthermore, the results of the calculation are compared with the results of the calculation of the rate of GDP and the contribution of each business sector to Indonesia's total GDP in the same period. The comparison results are then analyzed and conclusions are drawn using the Klassen typology (a model developed by Leo Hendrik Klassen), which groups a business sector into four categories (quadrants), as shown in table 4.

Table 4. Matrix of Business Sector Categories According to Klassen Typology

Growth \ Contribution	(yi › y)	(yi ‹ y)
(ri › r)	Quadrant I: Advanced and Fast-Growing Business Sectors	Quadrant III: Emerging (Potential) Business Sector
(ri ‹ r)	Quadrant II: Advanced but Stagnant Business Sector	Quadrant IV: Relatively Underdeveloped Business Sector

Source: Modified from (Katti et al., 2019)

Description:
ri = sector-specific growth rates in West Java Province
r = sector-specific growth rates in Indonesia
yi = the contribution of a particular sector to the total GRDP of West Java Province
y = the contribution of a particular sector to Indonesia's total GDP

As shown in Table 5, the average growth rate of the agricultural sector in West Java (ri) is 2.47%, which is lower than the average growth rate of the agricultural sector in Indonesia (r) of 3.71%. Similarly, the average contribution of the agricultural sector to West Java's total GDP (yi) is 7.40%, which is lower than the average contribution of the agricultural sector to Indonesia's

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total GDP (y) of 13.19%. Thus, it can be concluded that the agricultural business sector in West Java Province is in quadrant IV according to Klassen's typology, namely as a relatively underdeveloped business sector.

Table 5. Growth Rate and Contribution of Business Sector to Total West Java GRDP and Indonesia GDP 2015 - 2019

Business Sectors	Growth Rate		Contribution to Total GRDP and GDP	
	West Java (ri)	Indonesia (r)	West Java (yi)	Indonesia (y)
Agriculture, Forestry and Fisheries	2,47	3,71	7,40	13,19
Mining and Quarrying	-1,89	0,31	1,97	8,23
Manufacturing Industry	4,99	4,19	43,20	22,02
Electricity and Gas Procurement	-3,21	3,47	0,42	1,08
Water Supply, Waste Management, Waste and Recycling	5,47	5,53	0,08	0,08
Construction	6,46	6,04	8,29	10,33
Wholesale and Retail Trade; Repair of Cars and Motorcycles	4,87	4,12	15,54	13,78
Transportation and Warehousing	6,64	7,22	4,76	4,23
Provision of Accommodation and F&B	8,24	5,27	2,62	3,13
Information and Communication	12,18	8,93	3,92	5,24
Financial and Insurance Services	5,88	6,75	2,51	4,14
Real Estate	8,09	4,33	1,21	3,04
Company Services	8,50	8,48	0,43	1,82
Government Administration, Defense and Compulsory Social Security	3,94	4,30	1,99	3,50
Educational Services	7,47	5,31	2,78	3,23
Health and Social Services	9,88	6,90	0,78	1,16
Other Services	8,26	8,87	2,11	1,80

Source: West Java GRDP and Indonesia GDP data, BPS, 2022

Millennial Farmer Program in West Java Province.

Program Profile

The millennial farmer program is stipulated in West Java Governor Decree No. 25 of 2021 on the Development of Human Resources for Agriculture, Fisheries, and Forestry through the Millennial Farmer Program. Based on Article 3 paragraph (2) of the regulation, the objectives of the millennial farmer program are:

a. employment availability
b. ensuring the availability of quality and competitive agricultural products
c. optimal utilization of regional assets (*Barang Milik Daerah*/BMD), and
d. implementation of digital technology application facilities in the management and marketing of agricultural, fishery and forestry products.

The target participants of the millennial farmer program are residents of West Java and domiciled in West Java, aged between 19 - 39 years, have the interest and ability to run a farming business, and have a vision to advance the world of agriculture in West Java.

The millennial farmer program starts in 2021 to 2027. Implementation from 2021 to 2023 is the acceleration stage, while 2023 to 2027 is the program development stage.

Millennial farmer program activities and services include:

a. facilitation of farmland,
b. facilitation of supporting facilities and infrastructure,
c. inventory of market opportunities and off-takers,
d. technical guidance for farming business start-ups,
e. assistance in accessing farm business capital,
f. assistance in the farming business start-up process,
g. development of farming business institutions, and
h. assistance in marketing farming business products.

The program is implemented by a team stipulated in Governor Decree Number 520.05/Kep.219-Rek/2021 on the Millennial Farmer Program Implementation Team in West Java Province. The team includes the main implementer of the program, which is the regional apparatus in charge of agriculture, fisheries and forestry affairs. The main implementer is tasked with carrying out all activities and providing program services to participants. In addition, there are supporting implementers consisting of regional apparatus in charge of affairs such as regional property management, communication and information, and industry and trade. Supporting implementers assist the main implementers in the smooth implementation of the program, such as planning the utilization of regional property and marketing agricultural products. Finally, there are supporting implementers such as universities and business entities that, among others, play a role in conducting research and analysis of technology for agriculture, as well as opening access to business capital for program participants.

Program Implementation

The millennial farmer program began to be implemented in 2021, which began with the launch of the program on February 14, 2021 and the kick-off on March 26, 2021 which was held in Pasir Angling Village, Suntenjaya Village, Lembang District, West Bandung Regency. The West Java Provincial Government targets the creation of 5,000 millennial farmers by 2023.

Since its launch, the enthusiasm of prospective participants has been enormous. This can be seen from the number of registrants through the website https://petanimilenial.jabarprov.go.id as many as 8,998 people. After going through the first stage of screening, using the criteria

of 19 - 39 years old and West Java Province ID card, 4,439 people were selected. The second stage of screening, using the requirement criteria of not being bound by a work contract, resulted in 2,240 prospective participants. Furthermore, further selection was carried out by the main implementing regional apparatus of the program, including selection based on the Financial Information Service System (SLIK) or passing BI Checking, which finally resulted in 573 program participants.

To pursue the target of 5,000 millennial farmers by 2023, the West Java Provincial Government continues to strengthen the program, among others by actively socializing the program and collaborating with district/city governments throughout West Java. The registration pattern that was originally carried out online was changed to offline or a combination of both where the district / city government was also involved in the recruitment process. Screening of prospective program participants was also carried out by utilizing the database of people's business credit recipients from Bank BJB, and data on farmers under the guidance of Bank Indonesia, universities, and agricultural extension workers in the districts. As a result of these efforts, 1,772 participants were selected. After participating in a series of program activities, 1,249 met the criteria to be inaugurated on March 24, 2022 at the Bogor Agricultural University (IPB) Campus. The criteria for participants who can be inaugurated in 2022 is to have an average monthly income equal to the district / city minimum wage according to the participant's domicile.

In the second year of program implementation, using a similar recruitment pattern, 20,894 applicants were obtained, of which 5,658 people passed the selection and were determined to be program participants. After participating in a series of program activities, 4,095 participants met the criteria to take part in the inauguration which was held on May 30, 2023 at Padjadjaran University Campus - Bandung. By the end of 2022, program participants were grouped into four categories, namely beginner farmers, advanced farmers, middle farmers, and main farmers. The criteria for participants who can be inaugurated in 2023 are no longer based on the average monthly income earned by participants, but are different according to the category of farmers.

Administrative Aspect

Administrative aspects related to program inputs, which are the resources dedicated to the implementation of the program. Based on interviews and observations, the program has not been supported by program inputs, namely:

a. Materials

The first program resource is material in the form of technical policy tools that will serve as instructions for program implementers in planning and implementing program activities, which include roadmaps, implementation guidelines, and technical instructions. According to Charles O. Jones in (Agustino, 2020: 169), in carrying out program implementation activities or policy implementation, it is necessary to explain the substance in a language that is more operational and easy to understand so that it can be implemented and accepted by policy actors and targets.

The roadmap document obtained by researchers from the Program Secretariat Team shows that the document was completed in December 2022 or towards the end of the second year of the program implementation. According to the personnel of the Program Secretariat Team, at the beginning of implementation in 2021, the millennial farmer program did not yet have a clear shape. Based on interviews with all Program PICs, the unavailability of the roadmap at the time of program implementation affects the program planning and implementation process carried out by the main program implementing regional apparatus. This condition has an impact on the availability of other program resources, such as the budget and the diversity of approaches taken by the main program implementers during implementation.

b. Program Budget

Many shortcomings in the implementation of program activities can be related to the lack of appropriate financial resources. It may be that the planned budget is insufficient to meet the established needs. This is a plan deficiency that needs to be addressed (Alkin & Vo, 2018: 168).

Based on interviews with all Program PICs, information was obtained that the millennial farmer program, when initially implemented, was not supported by an adequate budget. The initial journey of the program, which began after the current fiscal year, made the program implementers only able to plan their needs and allocate budgets during the budget change period. When compared between the time the millennial farmer program was launched in March 2021, there was a time lag of about 6 months before budget changes were made and the program could actually be implemented.

c. Facilities

The facilities required for the implementation of the millennial farmer program are mainly government-owned land because the initial ideals of the program and the formulation of program objectives include optimizing the use of Regional Property (BMD) for participants' business land facilities. In addition to land, the facilities required for program implementation are buildings, other infrastructure and facilities, business capital, and digital technology.

According to observation and interviews with all Program PICs, regional apparatus have inventoried BMD that can be utilized by program participants as farms land. However, the location factor is an obstacle to optimizing the utilization of the land. The pattern of land utilization used in the end is collaboration between the West Java Provincial Government and the Regency/City government, as well as maximizing the participants' own land. The availability of business capital is fully facilitated by Bank BJB as the main partner of the program in the form of people's business loans. Digital technology tools for production and marketing processes are already available and implemented in several business commodities, such as fisheries and horticulture.

d. Human Resources

George C. Edward III in (Agustino, 2020: 155) states that the main resource in policy implementation is staff or human resources. One of the failures that often occur in policy implementation is due to insufficient, adequate, or incompetent staff in their fields. Increasing the number of staff or implementors is not enough. It is also necessary to have sufficient staff with the necessary skills and abilities to implement the policy or carry out the tasks desired by the policy itself. Human resources to implement the millennial farmer program consist of the program implementation team, mentors/tutors/field assistants.

In general, the millennial farmer program has been supported by sufficient human resources and in accordance with the planned criteria.

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e. Venture capital, off-takers and avalist

The coordinator of the millennial farmer program explained that the West Java Provincial Government is committed to providing access to capital and marketing for each program participant. To that end, the millennial farmer program is supported by Bank BJB as the party that will provide financing facilities for participants who apply and meet the predetermined requirements. To guarantee the provision of the financing facility, PT Agro Jabar as a BUMD of West Java Province acts as an avalis. In terms of marketing, the West Java Provincial Government, through the main implementing regional apparatus, cooperates with several off-takers who will absorb the products of the participants' agricultural businesses. One of them is PT Tani Group (TaniHub) which collaborates with the Food Crops and Horticulture Office.

However, based on observations and interviews with all Program PICs, information was obtained that business capital is still limited to the banking sector. In addition, not all commodities have the support of off-takers and avalis who will help ensure the absorption of business products of program participants and guarantee the ability to pay financing.

CONCLUSION

The implementation of the millennial farmer program in West Java Province has just entered its third year and is about to enter the development stage. As stated by (Alkin & Vo, 2018: 90), it takes several years to assess the results and impact of a program. This research has described six phenomena related to the agricultural business sector in West Java before the millennial farmer program was implemented, namely the decreasing number of young farmers, the low average wage of workers in the agricultural business sector, the unideal NTP and NTUP, the shift of agricultural labor to non-agricultural sectors, the decreasing contribution of the agricultural sector to GRDP, and the lagging of the agricultural business sector according to Klassen's typology analysis. Information on the phenomenon of farmer regeneration in West Java before the millennial farmer program was rolled out can be used as a baseline to measure, assess and evaluate the performance of the program in the future.

Based on the research, there are problems with program implementation in administrative aspects that threaten the achievement of the millennial farmer program goals, namely the absence of a roadmap as the direction of program policies and strategies, program budgets that are not in accordance with the calculation of the needs plan per participant, land facilities that are not fully ready to be utilized as business land by program participants, business capital that is still limited to the banking sector, and not all commodities have the support of off-takers and avalis who will help ensure the absorption of business products of program participants and ensure the ability to pay financing.

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