

Conference Paper

The Contribution of the Agricultural Sector to Community Welfare in the Cirebon District

F. Mardhatilla*¹, I. S. W. Atmaja¹, E. Hartono², F. Hidayat² and F. Ferdianto³¹Agriculture Faculty, Universitas Swadaya Gunung Jati, Indonesia²Economic Faculty, Universitas Swadaya Gunung Jati, Indonesia³Engineering Faculty, Universitas Swadaya Gunung Jati, Indonesia**ORCID ID**F. Mardhatilla : <https://orcid.org/0000-0003-0256-7150>I.S.W. Atmaja : <https://orcid.org/0000-0003-3968-713X>E. Hartono : <https://orcid.org/0000-0002-4052-0196>F. Hidayat : <https://orcid.org/0000-0001-8614-2090>F. Ferdianto : <https://orcid.org/0000-0002-6647-7050>**Abstract.**

Gedong Gincu mango (GGM) is a leading commodity in the Cirebon district. It's cultivated intensively in five sub-districts and is a source of income for the community. The study aimed to analyze the contribution of the agriculture sector to community welfare, especially in the Cirebon district. This research was conducted from August to October 2020 in the five sub-districts that produce GGM. Descriptive, quantitative field surveys were provided to 300 participants and multiple linear regression models were used to analyze the data. The results showed that the agricultural sector has contributed to the GRDP, but the extent to which it does so varied between the five sub-districts. The agricultural sector in the Sedong and Greged sub district had the highest contribution to the GRDP, but they both have the lowest score on the Human Development Index (HDI). This suggested that the existence of a leading GRDP does not guarantee high community welfare in GGM producing areas. HDI was found to have a strong correlation to the GRDP of an area. Economic development affects community welfare as suggested by the HDI.

Keywords: gedong gincu mango, human development index, gross regional domestic

Corresponding Author: F.

Mardhatilla; email:

fmardhatilla@gmail.com

Published 27 December 2022Publishing services provided by
Knowledge E

© F. Mardhatilla et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the SIRES Conference Committee.

1. INTRODUCTION

Community welfare in a region can be measured by micro and macro scale with some parameters. Human Development Index (HDI) is one of parameters to measured community welfare in micro scale. HDI built from three dimensions, including education, health, and purchasing power parity (PPP). The increasing of HDI value, it means that community welfare in some area is getting better [1]. In a while, Gross Regional Domestic Bruto (GRDP) can be used a parameter to measured community welfare in macro scale. PDRB show the abundant of economic resources, including 17 sector in some area.

OPEN ACCESS

Agriculture is one of supporting system of economic development in some area. Agriculture have important role in economic growth since its provide raw material, foods also helps to generating employment [2]. Cirebon district is one are in west java which is have abundant agriculture [3]. In 2018, agriculture sector contribute as 15.58% of total GRDP, and it show that agriculture sector had great contribute after industry manufacture sectors (contribute 20.96%) [4].

Gedong Gincu Mango (called GGM) is one of agriculture product cultivated in Cirebon regency. In 2020, this commodity produced as 536.250 quintal in cultivation area more than 1000 hectare [3]. The typical climate and topography of Cirebon are suitable for GGM cultivation. Based on Jaenudin et al. [5] GGM from Cirebon have unique characteristic, such as medium size, sufficient water content and have good taste since the balanced of sweet and sour flavour. GGM have comparative advantage so GGM be a leading commodity in Cirebon regency [6]. GGM also have

economic value and international market potential [7], with a good cultivation technique GGM can be improving community welfare in Cirebon district [8].

The cultivation area of GGM in Cirebon district was spread in five sub district, such Sedong, Susukan Lebak, Greged, Beber, and Lemahabang sub district. Both of them contribute 46% from mango production in Cirebon district. Although GGM had high contribute to economic of Cirebon district, is the agricultural sector effected to improve community welfare in those area?. Of course need some research to answer this question. The aims of this research is to analyze the contribution of agricultural sector to community welfare especially in Gedong Gincu Mango producing area in Cirebon district.

2. METHODS

This research was conducted in five GGM producing area in Cirebon district, including Sedong, Susukan Lebak, Beber, Lemahabang, dan Greged sub district. Field research was conducted at August to October 2020. Descriptive quantitative with field survey to 300 research subject was used in this research. Multiple linear regression model was used to analyzed the data.

Agricultural sector was used is to measured Gross Regional Domestic Bruto (GRDP), while welfare variables is measured from Human Development Index (HDI). Parameter to measured HDI including three dimension, education, health, and Purchasing Power Parity (PPP). Ordinary Least Square was used to estimate model.

Education dimension measured including mean years of schooling and expected years of schooling. Life expectancy index to show degree of health assessed by expectancy life at birth. While living dimension measured by gross national income per capita [9].

3. RESULTS AND DISCUSSION

3.1. Gross Regional Domestic Product (GRDP)

Agricultural sector had effect and contribution to economic development in Cirebon district. Data from Statistical Institute of Cirebon District show that agricultural sector contribute as 7.59 trillion rupiah in 2019. It's means that agricultural sector contribute 15.45% from totally GRDP of Cirebon district [4]. Linear with Fajri and Rizki [10] show that agricultural sector as the largest contributor to GRDP of Aceh province and it's contribute as 28.31%. Its means that agricultural sector have main role to support the development of other sub sectors.

GGM as leading commodities cultivated in some area in Cirebon district, such Sedong, Lemahabang, Greged, Beber, and Susukan Lebak sub district. Regression test analysis show that GRDP had correlated to HDI value, as 0.92. It's means that the community welfare in producing area of GGM, represented from HDI value effected by GRDP [12].

GRDP in five producing area of GGM also effected by activities in agricultural sector. The contribution of agricultural sector to GRDP of Cirebon district show in Table 1. Agricultural sector in Sedong sub district have highest contribution (28.54%) than others sub district, while Susukan Lebak sub district have the lowest contribution (11.67%).

Sedong and Lemahabang sub district have the highest of GRDP than others area. Agriculture sector contribute as 11.93% to GRDP Lemahabang sub district, and it's make that the agricultural sector as the second contributor to sub district GRDB after financial services sector. The same condition also in Susukan Lebak sub district, where agricultural sector have high contribution to sub district GDRB as 11.67% and make this sector as second contributor after financial services sector.

In the other hand, agricultural sector as leading sector in Greged and Beber sub district. Agricultural sector had main role and give highest contribution to GRDP in both of sub district. GGM is main commodities cultivated intensively in those area. In 2019 the GRDP value in Greged sub district is 141 billion rupiah and Beber sub district is 168 billion rupiah.

TABLE 1: The contribution of agricultural sector to GDRB sub district in five producing GGM area at 2019.

Number	Sub District	GRDP (Rupiah)	Percentage of Agricultural Sector Contribution
1	Sedong	835.685,79	28.54
2	Greged	538.192,34	26.23
3	Beber	644.687,57	26.02
4	Lemahabang	1.127.312,59	11.93
5	Susukan Lebak	762.997,00	11.67

Source: research result, processed.

3.2. Human Development Index (HDI)

HDI is one of parameter to measured community welfare in micro scale. The HDI show how far the region has achieved targets, such life expectancy until 85 years, basic education for all level society, also expenditure and consumption as decent standard of living. HDI built up three dimension such education, health, and purchasing power parity (PPP). Education dimension measured by two indicators, mean years of schooling (MYS) for adults aged 25 years old and more and expected years of schooling (EYS). Mean years of schooling (MYS) defined as the number of years that used to get formal education. While expected years of schooling (EYS) defined as expected number of years to get formal education in the future.

The Human Development Index (HDI) in five producing area of GGM shown in Table 2. Greged and Beber sub district have the lowest of HDI than others sub district. The HDI of Greged sub district is 65.32 and Beber sub district is 66.59. While, Lemahabang sub district have the highest HDI, as 68.31.

TABLE 2: Human Development Index in five sub district at 2019.

Number	Sub District	Education Level (Year)		Health (Year)	PPP (Rupiah)	HDI
		MYS	EYS			
1	Sedong	6.72	12.68	72.23	2,608,545	67.89
2	Greged	6.38	12.34	72.87	2,579,286	65.32
3	Beber	6.42	12.26	72.88	2,632,041	66.59
4	Lemahabang	6.88	12.35	71.25	2,681,184	68.31
5	Susukan Lebak	6.54	12.69	72.22	2,597,412	66.99
	Cirebon District	6.74	12.57	71.84	2,653,007	68.42

Source: research result, processed.

Greged and Beber sub district also have education level both mean year school and expected year school lowest than others sub district. Regression test analysis show

that agricultural sector in five GGM producing area not effected to HDI. It's means that the existence of GGM as leading commodity not effected to community welfare. Some efforts needed to increasing the GGM value, such repairing cultivation technique, post harvesting technology, marketing, product diversification, and also government regulation.

Although agricultural sector in Greged and Beber sub district have high contribute to GRDP, but both areas have the lowest HDI than others sub district. From this research we can conclude that the existence of leading commodities does not gave guarantee the community welfare. The relationship between GDRB and HDI in five GGM producing area shown in Table 3.

TABLE 3: The relationship between GRDP and HDI.

Number	Sub District	HDI	GRDP (Rupiah)
1	Lemahabang	68.31	1.127.312,59
2	Sedong	67.89	835.685,79
3	Susukan Lebak	66.99	762.997,00
4	Beber	66.59	644.687,57
5	Greged	65.32	538.192,34

Source: research result, processed.

Based on Table 3, know that the increasing of HDI value followed by the increasing of GRDP. Linear with Agustina et al. [13] conclude that GRDP have significantly correlation to HDI. Human development supports economic development, and also good quality of economic development make human development better.

4. CONCLUSION

Agricultural sector is one of sector that have contribute GRDP area, including five sub district as producing area (1)of Gedong Gincu Mango. Although GGM as leading commodities in Cirebon district, but the existence of this commodities cannot increasing the community welfare that show from GRDP and HDI value in each sub district. HDI and GRDP have a good correlation, where increasing HDI followed by increasing GRDP. Human development will be support economic development in an area.

Some effort needed to improve GGM value as leading commodity. This efforts including repairing cultivation technique, post harvesting technology, marketing, product diversification, and also government regulation.

References

- [1] Alhudhori M. Pengaruh Ipm, Pdrb Dan Jumlah Pengangguran Terhadap Penduduk Miskin Di Provinsi Jambi. *Ekon. J Econ Bus.* 2017;1(1):113.
- [2] Khan W, Jamshed M, Fatima S. The Relationship Between Gross Domestic Product And Human Development Index : Evidence From 11 Middle East Countries. *J Public Aff.* 2020;20.
- [3] Badan Pusat Statistik Kabupaten Cirebon. Kabupaten Cirebon Dalam Angka Tahun 2020. Bps, Kabupaten Cirebon; 2020.
- [4] Badan Pusat Statistik Kabupaten Cirebon. Produk Domestik Regional Bruto Kabupaten Cirebon 2016 - 2020. Badan Pusat Statistik Kabupaten Cirebon, Kabupaten Cirebon; 2021.
- [5] Jaenudin A, Suradinata T, Maryuliyanna M. The Effect Of Micro-Climate To Quality And Existence Of Gedong Gincu Mango. *J Phys Conf Ser.* 2019;1360(1):012003.
- [6] Awaliyah F. Keragaan Agribisnis Komoditas Mangga Gedong Gincu Di Kabupaten Cirebon Agribusiness Of Gedong Gincu Manggo Comodities In Cirebon Regency. Mahatani. *Agribusiness And Agricultural Economics Journal.* 2018;1:129–41.
- [7] Ariningsih E, Saliem Hp, Maulana M, Septanti Ks. Kinerja Agribisnis Mangga Gedong Gincu Dan Potensinya Sebagai Produk Ekspor Pertanian Unggulan Agribusiness Performance Of Gedong Gincu Mango And Its Potential As A Superior Agricultural Export Product. *Forum Penelitian Agro Ekonomi.* 2021;39:51-74.
- [8] Sulistyowati L, Natawidjaja Rs. Commercialization Determinant Of Mango Farmers In West Java- Indonesia Int J. *Appl Bus. Econ Res J.* 2016;14:7537–7557.
- [9] Undp. Human Development Index (Hdi). [Internet]; 2021. Available From: [Http://Hdr.Undp.Org/En/Content/Human-Development-Index-Hdi](http://hdr.undp.org/en/content/human-development-index-hdi)
- [10] Fajri R, Rizki Cz. *J Ilm Mhs Ekon Pembang.* 2018;3:721–9.S
- [11] Hussain S, Nasiri A, Akram Ms, Zahra F. The Relationship Between Gross Domestic Product And Human Development Index: Evidence From 11 Middle East Countries. *Rmc J Soc Sci Humanit.* 2020;1:41–8.
- [12] Agustina E, Rochaida E, Ulfah Y. Pengaruh Pengeluaran Pemerintah Daerah Sektor Pendidikan Dan Kesehatan Terhadap Produk Domestik Regional Bruto Serta Indeks Pembangunan Manusia Di Kalimantan Timur. *Inovasi.* 2016;12:192–217.