

# **Corporate Private Sector investment in Agriculture in Indonesia**

A case study of Indonesia

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Agriculture and to Stimulate Food Production (GCP/GLO/267/JPN)**

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## 1. INTRODUCTION

In Indonesia, the agricultural sector has a crucial role for the economy because of its significant contribution to economic growth, foreign exchange earnings, and in achieving food security. Agriculture has also strategic roles in national economic development, especially in reducing poverty, providing employment, improving farmers' welfare and maintaining sustainable utilization of natural resources and environment.

In spite of its significant contribution to the national economic development, agriculture in Indonesia is facing many challenges especially in the provision of food to meet the increasing demand due to rapid population growth and increasing income of the population. Meanwhile, Indonesia is also facing the problem of sustaining its food production capacity due the limitation in the natural resources availability. First, our fertile agricultural land as the basis for food production is decreasing due to the rampant conversion of agricultural lands into non-agricultural utilization. Second, the availability of water resources for agriculture is depleting mainly due to the declining of irrigation services and the increasing competition in water use for non agriculture needs. Thirdly, the emerging negative impacts of global climate change certainly complicate existing problems, especially in increasing production risks and uncertainties.

Currently, Indonesian agriculture employs almost 40 percent of the workforce. Meanwhile, the agriculture sector contributes about 14 percent to national GDP. This situation implies a relatively low level of labor productivity compared to other sectors (especially manufacture). This situation also reflects the fact that more than 60 percent of poor people in Indonesia live in the rural area where they mostly rely on agriculture sector for livelihood.

Historically, increases in agricultural productivity are credited with reducing poverty in Indonesia during the 1970s and 1980s. However, as indicated by World Bank (2010), since the 1990s the sector has been characterized by stagnation and low productivity due to years of declining private and public sector investment.

During the 1970s and 1980s period, the development of agriculture sector was directed heavily in order to achieve a self-sufficiency level of food production (especially rice). Thus, mode of agricultural investment, especially that provided by public sector (government), was mostly dedicated to the above objective. By that scheme, Indonesian farmers were provided during the period with various appropriate government support so that they would focus only on how to do farming activities in the best way.

Considering the above situation, as well as the role and importance of agriculture sector in the future, the effort to increase productivity in agriculture sector is very important. Therefore, a proper stimulation to agricultural investment is needed, involving related different agents, particularly the private sector.

This report is study of private sector investment in Indonesian agriculture. Its purpose is to:

- collect the views and perceptions of corporate private sector investors regarding investment in agriculture;
- Identify the (i) drivers of corporate private investment and (ii) the factors that limit the corporate private sector investment in agriculture, particularly food production;

This study was conducted by employing both primary and secondary data, and also using interview of the private sector players. Primary data were collected through questionnaire survey, focus group discussions, and interviews.

## 2. INDONESIA'S AGRICULTURE SECTOR: AN OVERVIEW

Agricultural GDP increased sharply in the late 1960s and reached its peak in the early 1980s. It must be noted that the Government put large investment in the 1960s such as irrigation systems, agricultural extension and subsidy in order to achieve the goal of rice self-sufficiency. These large investments finally bore fruit in 1984 when the country achieved rice self-sufficiency. However, in the 1990s there was the declining growth of GDP of agriculture which reached its lowest point in the late 1990s which might be due to the Asia Financial Crisis in 1997. Since the beginning of the new century, agriculture sector began to increase again. During the period of 2006-2010, the growth of agriculture sector GDP averaged 3.7 percent (Table 1).

Given the more rapid growth of the manufacturing sectors, the agricultural sector's share of Indonesia's GDP fell from 45 percent in 1970 to 15.3 percent in 2010. The agriculture sector's share of employment currently stands at 40%, having declined from a 1980 share of 56%. Nevertheless, agriculture still plays an important role in the national economy and is an important livelihood for the rural population. In fact, the vast majority of Indonesia's rural poor still depends on agriculture for employment and income as well as their own food supply.

**Table 1. Average GDP Growth by Sector (%)**

Sector	1961 -65	1966 -70	1971 -75	1976 -80	1981 -85	1986 -90	1991 -95	1996 -00	2001 -05	2006 -10
1. Agriculture, Livestock, Forestry and Fishery	1.4	3.8	3.1	4.0	4.1	3.0	2.9	1.4	3.3	3.7
2. Mining and Quarrying	2.2	15.8	9.6	4.8	(2.1)	2.6	4.6	1.9	(0.6)	2.4
3. Manufacturing Industry	1.9	7.7	10.1	15.1	9.4	10.7	10.5	3.1	5.0	3.9
4. Trade, Hotel & Restaurants	0.8	95.3	9.8	7.5	5.6	8.4	7.4	0.3	5.6	6.4
5. Others	3.8	24.2	13.3	12.5	6.9	8.8	9.6	1.2	7.0	8.9
<b>Gross Domestic Product</b>	<b>1.9</b>	<b>10.0</b>	<b>7.9</b>	<b>7.7</b>	<b>4.4</b>	<b>6.5</b>	<b>7.3</b>	<b>0.9</b>	<b>4.7</b>	<b>6.1</b>

Source: BPS (Processed)

Looking at the growth rates of agriculture sub-sectors, there was a tendency that the growth of food crops to be lower compared to other sub-sectors (Table 2). During the period of 2006-2010 the growth of food crops ranked second out of five sub-sectors. This might be due to the government policy that changed from rice self-sufficiency to rice self-sufficiency on trend. The former refers to absolute rice self-sufficiency where all rice domestically consumed is produced in the country and no rice import is allowed. The latter refers to permitting rice imports in case of insufficiency in rice production in the country vis-à-vis consumption due to harvest failures caused by natural disasters or pest and disease attack.

**Table 2. Average Growth of Agriculture Sub-Sectors (%)**

Sector	1961 -65	1966 -70	1971 -75	1976 -80	1981 -85	1986 -90	1991 -95	1996 -00	2001 -05	2006 -10
1. Food Crops	4.4	0.4	7.8	4.3	6.0	2.4	1.8	0.9	2.5	3.9
2. Estate Crops	5.7	0.6	(0.6)	6.3	6.9	2.9	5.0	1.5	5.0	3.3
3. Livestock and its product	4.9	0.7	29.4	3.2	8.7	3.7	5.8	1.0	4.9	3.4
4. Forestry	(7.9)	16.8	(6.7)	2.7	(9.3)	3.3	0.0	0.4	(0.2)	0.0
5. Fishery	11.6	(1.1)	7.2	5.0	6.9	5.3	5.4	4.7	4.6	5.5
<b>Agriculture, Livestock, Forestry and Fishery</b>	<b>1.4</b>	<b>3.8</b>	<b>3.1</b>	<b>4.0</b>	<b>4.1</b>	<b>3.0</b>	<b>2.9</b>	<b>1.4</b>	<b>3.3</b>	<b>3.7</b>

Source: BPS (Processed)

Table 3 shows structural change in Indonesian economic development, reflected in the share of agriculture sector to GDP that was reduced from almost 60 percent in the period 1961-1965 down to only about 14 percent in 2006-2010. The reduction of agricultural share to GDP was accompanied by the increasing of shares other sectors to GDP, i.e. manufacturing, trade, and other sector such as services and telecommunication and transportation.

Furthermore, looking inside the agriculture sector, the food crops sub sector still dominates in contributing to agriculture sector GDP in Indonesia. Table 4 shows that the share of food crops to agricultural GDP has remained dominant compared to other sub-sectors. In the period 1961-1965, the share of food crops to agricultural GDP exceeded 60 percent, while in the 2006-2010 period, its share was still about 50 percent of agricultural GDP. It reflects that the performance of Indonesian agriculture sector in the near future will still rely on the food crops sub sector.

**Table 3. Average GDP Shares by Sector (%)**

Sector	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95	1996-00	2001-05	2006-10
1. Agriculture, Livestock, Forestry and Fishery	55.8	50.9	37.6	29.9	25.9	27.3	20.0	17.2	14.9	14.4
2. Mining and Quarrying	3.6	3.7	13.8	21.3	21.3	14.9	11.6	10.4	9.3	11.0
3. Manufacturing Industry	8.0	8.6	9.1	7.5	3.7	4.1	15.7	26.2	29.0	26.7
4. Trade, Hotel & Restaurants	24.0	11.4	17.7	15.8	17.0	19.9	18.0	15.9	16.2	14.2
5. Others	8.6	25.4	21.8	25.5	32.1	33.8	34.7	30.3	30.6	33.8

Source: BPS (Processed)

**Table 4. Average Shares in Agricultural GDP by Sub-Sector (%)**

Sector	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95	1996-00	2001-05	2006-10
1. Food Crops	64.8	63.9	59.7	59.1	60.9	61.3	55.6	52.7	51.1	49.0
2. Estate Crops	17.4	17.1	16.9	17.7	15.9	16.5	16.4	16.6	15.1	14.2
3. Livestock and its product	6.7	6.0	7.0	7.1	10.5	10.3	11.0	10.8	12.6	11.8
4. Forestry	3.1	3.4	10.7	10.2	5.8	4.2	7.9	8.0	6.2	5.9
5. Fishery	8.0	9.5	5.6	5.9	7.0	7.7	9.2	11.9	15.1	19.0

Source: BPS (Processed)

The reduction of agricultural share in national GDP as described above was not associated with a proportionate decline or change in employment structure among sectors. In terms of employment, agriculture still accounts for quite a large proportion, about 40 percent, of the population who are dependent on it for livelihood despite the reduction in the share of agriculture in the national economic picture. Table 5 shows that along the period 1986-2010 the employment structure among sectors was relatively stagnant compared to the changing GDP shares. For the agriculture sector, the situation also brought a resulting decrease in labor productivity. Thus, its impact means that farmers' welfare has decreased relative to those in other sectors.

Table 5. Employment by Sector (Million People)

Sector	1986-88	1989-91	1992-94	1995-97	1996-00	2001-05	2006-10
1. Agriculture, Livestock, Forestry and Fishery	37.1	39.8	38.5	35.9	37.9	41.0	41.1
2. Mining and Quarrying	0.3	0.5	0.6	0.8	0.7	0.7	1.1
3. Manufacturing Industry	5.6	7.4	9.1	10.7	10.9	11.8	12.7
4. Trade, Hotel & Restaurants	10.1	10.9	12.5	15.9	17.1	17.9	21.1
5. Others	14.7	14.2	17.1	20.5	20.4	21.1	26.2
<b>Total</b>	<b>67.8</b>	<b>72.8</b>	<b>77.8</b>	<b>83.8</b>	<b>87.1</b>	<b>92.6</b>	<b>102.2</b>

Source: BPS (Processed)

**In synthesis, the key features of Indonesian agriculture can be summarised as follows:**

- Indonesia is the World's 10th largest agricultural producer
- Agriculture contributes 14 percent of GDP and employs about 40 percent of the labour force
- It is relatively land scarce, but abundant in renewable water resources
- Food crop production is dominated by tiny farms, with average size of 0.3-1.4 ha
- Perennial crops are grown by both smallholders and large private and state-owned farms
- Agriculture exports 2.5-times higher than imports
- Palm oil and natural rubber contributes 60% of total agriculture exports
- Poverty rate: 29.1 million (11.7%)
- Food consumption level in the country has improved, but malnutrition persists.

### 3. HISTORY OF INVESTMENT IN INDONESIA: AN OVERVIEW

Historically, investment is associated as "colonial investment" which stretched in (1) previous investment for exploitation of resources and agriculture, (2) new investment for mastering local market also raw material and cheap worker so that become more competitive on international market.

On the past, investment from one country to the others can be happened on the practice of colonialism. Colonialism have been open the gate for the investment on the colony.

The colony will follow investment scheme which characteristic by exploitation and domination from the colonial countries then bring back Home (taking the economics' surplus to the maximum).

#### Investment as a part of International Treaties and agreements

After WTO failed and deadlock because of the push of the country such as India and China, Indonesia move forward with doing the free trade agreement. Right know, Indonesia actively conducts trade agreement with country such as: Japan, Australia, New Zealand, China, India, Korea and potentially with USA and European Union.

Free Trade Agreement in Indonesia

No.	Name of FTA	Status
1.	ASEAN Free Trade Agreement (AFTA)	Signing
2.	Indonesia- Japan EPA	Signing
3.	ASEAN-China FTA	Signing
4.	ASEAN-Korea FTA	Signing

5.	ASEAN-India FTA	Signing
6.	ASEAN-EU FTA	On the process
7.	ASEAN-Australia-New Zealand FTA	Signing
8.	Indonesia -AS FTA	Pre-negotiation
9.	Indonesia - EFTA (Swis, Leichestein, Norwegia, dan	Joint-Study Group

Source :IGJ's document

One of core idea of FTA is the eliminate tariff. The government of Indonesia actively doing the agenda eliminate tariff barrier especially import tariff for the agricultural product. In fact, the existence of the tariff have related with the live of farmer, labor and poor people.

Investment ruled by or at least part of international trade agreement. So that investment and trade basically rule by the same regime that is multinational capital.

Investment arranged through bilateral agreement such as: Bilateral Investment Treaties (BITs), Trade and Investment Framework Agreement (TIFA), Economic Partnership Agreement (EPA) and Bilateral Free Trade Agreement (BFTA).

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Regional Agreement such as: North American Free Trade Agreement (NAFTA), European Union, Mercosur<sup>1</sup>, ASEAN, Energy Charter Treaty OECD); also rule by investment problem.

Investment also arranged by Multilateral Agreement like: Multilateral Agreement on Investment (MAI) and failed, General Agreement on Trade in Services (GATS) and Trade-Related Investment Measures (TRIMS) on the WTO. Also practiced by United Nations Conference on Trade and Development (UNCTAD), Organization for Economic Co-operation and Development (OECD) and the group of World Bank.

### **The law as incentive for investment**

The act no. 25. 2007 about investment in Indonesia is for giving facility and incentive to the bigger investment especially in foreign capital. Investment is practiced based on equal treatment with no differentiate to the origin Country. All kind of trade open to the investation excluding giving state close by terms and condition.

The investment giving the incentive tax like tax income, tax fiscal for capital, engine, or equipment, the free tax for raw material, value add tax, the accelerate of amortisation and property tax.

The investor can flow the asset to another party according to the term and condition of law. The investor had a right to transfer and repatriate on the foreign exchange.

Service and or right license for land by foreign party on the long term (95 year) is very easy in Indonesia. In fact, the previous law gave only 70 years.

### **The push of foreign investment**

Multilateral fund like World Bank, Asian Development Bank, and developed countries like Japan and USA give support to the new investment law which is No. 25, 2007. World Bank through private sector agency is helping government of Indonesia fix the law of investation, with the purpose to make short cut investation procedure and eliminate useless bureaucratization.

Before the act no.25, 2007 has been legalized, World Bank state : The government has an investment climate policy package covering five broad areas: investment policy, customs, taxation, labor regulation and SME policy. The package has 85 action items with time bound targets, and delegates a minister to be responsible for each action. Through September 2006, 30 of the measures had been completed and 17 were in progress.

Important reforms such as the submission of the new investment law to Parliament, cancellation of regional regulations harmful to business activity, and guidelines for the development of one-stop shops by local government, have been carried out under the investment climate reform package. The World Bank supports this package.

The amount of government debt right now is 1600 trillion rupiahs consist of domestic debt, and foreign debt, which the obligation of interest rate and predict over nominal economic growth of Indonesia. If government debt merge with the private debt in year of 2008, the amount is 2500 trillion rupiahs with

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<sup>1</sup> Mercosur is the result of a treaty signed in 1991 by Argentina, Brazil, Paraguay and Uruguay.



the obligation to pay interest and installment of principal foreign debt 450 trillion rupiahs which consist of 350 trillion rupiahs on private sector and 90 trillion rupiahs by government.

That amount equal to the four times the Indonesia economic growth in 2008 which is 119 trillion rupiahs. By the amount of debt we can conclude that Indonesia's economic potential is enough to full, serve to the other's country interest.

### Foreign Capital Domination

The data shows that the investment in Indonesia runs into decrease significantly last 10 year. Foreign capital became dominant in the structure of Indonesia's investment. The amount of foreign capital is 86.79 % of the total investment in 2008.

The development of realization of investment

(The amount of permanent license)

Year	Domestic National Investment		Foreign Investment	
	Amount of Project	Amount of Investation billion Rp.)	Amount of Project	Amount of Infestation (US\$ Juta)
1999	248	16.286.7	504	8.229.9
2000	300	22.038.0	638	9.877.4
2001	158	9.890.8	453	3.509.4
2002	103	12.500.0	442	3.090.1
2003	119	11.890.0	570	5.450.4
2004	129	15.264.7	544	4.601.1
2005	214	30.665.0	909	8.914.6
2006	162	20.649.0	869	5.991.7
2007	159	34.878.7	982	10.341.4
2008	239	20.363.4	1138	14.871.4

Source: Badan Pusat Statistik dan BKPM, disusun oleh Bappenas RI tahun 2007

The investment in Indonesia includes all economics' sector; agriculture, plantation, forestry, oil and gas mining and mineral mining. Over 85% the investment of oil and gas, 100% mineral mining and 70% coal and over a half plantation investment are controlled by foreign capital.

### The control of big scale land

The investment control by land on big scale ; right know, the contract of employment of oil and gas is 95.45 billion hectare, contract work (mineral) 6.47 billion hectare, mineral exploitation right 7.67 billion hectare, coal exploitation right 24.77 hectare, KKB/PKP2B 5.2 million hectare, control right of natural forest (HPH Alam) 27.72 million hectare, industrial timber (HTI) 3.4 million hectare, National Plantation 3,3 million hectare, private plantation 1.08 million hectare and total 175.06 million hectare. That amount is equal to 93 % land area in Indonesia. The total of agriculture area that is controlled by farmer is only 11.8 million hectare.

The structure of land use in Indonesia year 2005

No.	The effectiveness	Total area (million ha)
1.	Oil and Qas contract	95.45
2.	Work contract (mineral)	6.47
3	Mineral contract	7.67
4	Coal exploitation (coal right by Local Government)	24.77
5	Coal contract (KKB/ PKP2B by central Government)	5.2
6	Rights to control forest_{_HPH}_ Alam	27.72
	Forest for Industrial Cultivation	3.4
7	National Plantation *	3.3
8	Private Plantation*	1.08
	Total	175.06
	Land area	192.26

Sources : the data process from all sources, 2005; \* Data year 2003

The agricultural land used by farmers for rice production is only 11.8 million hectare. National rice production in 2005 was 54.056 million ton, so it is equal with 34.055 million ton of rice (conversion factor from dry husky paddy to rice is 0.63). When compared with population, Indonesian can consume 155.36 kilogram per year or 430 gram per capita per day by themselves.<sup>2</sup>

The large of Indonesian forest reaches 100 million hectare. Half of the forest has experienced on damage resulted from exploitation activity and another cause such as forest burning. The rapidity of deforestation annually reaches 2,2 million hectare. Activities of big companies, mining, forestry, and plantation have big contribution on deforestation.

Agricultural Production Land (Rice)

Tahun	Supporting Daya Dukung lahan dan Produksi Pertanian			
	luas Lahan Padi	Pertumbuhan %	Produksi Padi (ribu ton)	Pertumbuhan
1996	11,6	1,1	51.101	2,7
1997	11,1	-3,7	49.377	-3,4
1998	11,7	5,3	51.490	4,3
1999	12,0	2,0	50.866	- 1,2
2000	11,6	-3,0	51.899	2,0
2001	11,5	-0,9	50.461	-2,8
2002	11,5	0,2	51.490	2,0
2003	11,5	-0,3	52.137	1,3
2004	11,9	3,8	54.089	3,7
2005	11,8	-0,9	54.056	-0,1

Sumber : Badan Pusat Statistik 2007

**Natural Resources exploitation**

Plantation sector; Indonesia is world's biggest production of seeds number 6, tea biggest production no.6, coffee biggest production no 4, chocolate on number 4 biggest production and number 2 CPO production, white pepper number1, black pepper number 2, nutmeg number 1, natural rubber number 2,

<sup>2</sup> Income that is equal to 2.100 calories/day is a bottom line for them to be called "poor. In rice there are 360 calories per 100g or 3.600 calories per 1 kg. It means that 2.100 calories equals 0.58 kilogram of rice per day per capita.

synthetic rubber number no.4, plywood number 1 and fish produce number 6 in the world.

Oil and gas mining sector, Indonesia is on 20 world's oil producing country compared to the Asia Oceania, Afrika in 2005. Also, Indonesia is 10th gas produce country in the world (after Rusia, Afrika, US, Canada, Algeria, UK, Norway, Montenegro, Netherlands). In the 2008, Indonesia is on 7th gas exporting country in the world. Besides that, Indonesia is 20th crude oil producing country in the world (2005). Indonesia is on 7th over 10th rank on the coal produce in the world.

Mineral mining sector; Indonesia is 7th world's bauxite production. 2nd world copper producer and 6th gold producer, 3rd world nickel producer, 11th silver producer, 2nd tin world's producer right after China.

### **Export Orientation of Raw Material**

Indonesia is the biggest exporter of raw material. 2nd world's coal, gas, tin, and palm exporter. This export done by foreign company which play important role in strategic sector such as: oil and gas, mineral, coal and plantation. Almost all export's income taken by foreign company and profit are transferred into the origin of their country.

As the result, the chain of global trade, Indonesia's position is still as a producer of raw material in order to support developing country industry. The surplus of economy and multiplier effect from the natural resources exploration in Indonesia and the economics of Indonesia become de-industrialization.

### **Conclusion**

Indonesia's Position on the chain of global trade had not been moved since 200 years ago. This country is the source of mineral, gas, and plantation in order to support industry in the developed country. On the other hand, domestic economy moves into de industrialization.

The entrance of big scale investment makes threat to the life of farmers. The case study held by IGJ related to the mining investment Newmont Corporation, Lombok Tourism Development Corporation and the making of Special Economic Zone Batam, show that big scale of investment makes takeover of land area of the farmer, the taking of natural resources and taking the benefit by foreign capital and ecological impact and social conflict.

Big scale of investment makes the access of community vanish to the natural resources especially the productivity's of community become decrease. As the result, Indonesia becomes importer of food such as: rice, soybean, meat, milk, wheat, sugar, salt on the big amount. Before that case, this food product can be produced by domestic farmer.

## **4. INVESTMENT IN AGRICULTURE**

As we have learnt from both macroeconomic and microeconomic perspectives, the contribution of investment is very important in promoting growth. Investment is important both in promoting capital formation, as well as in order to replace or compensate capital depreciation. To support the promotion of sustained and quality of economic growth, the appropriate level, sustained, and well-design investment scheme will be needed. The above lesson is also relevant to agriculture sector in Indonesia, with its uniqueness, and crucial roles for Indonesian economy.

In relation to the above, some empirical studies have demonstrated that in Indonesia, low level of agricultural investment—both by private and public sector—is one of the important factors that caused stagnation of agricultural productivity and growth. Fuglie (2004) and World Bank (2010) found that low

levels of both private and public investment have caused Indonesian agricultural productivity to stagnate since the 1990's. Furthermore, the decline in total factor productivity (especially during the 1993-2000 period) in Indonesia was due to the downward trend in public spending for agricultural development since the mid 1980s (Fuglie, 2003 in Simatupang *et. al.*, 2004).

Hadi, *et. Al.* (2010) reported that agricultural investment has positive impacts on agricultural sector GDP and new labor absorption; meanwhile, agricultural investment by farmers also has a beneficial impact on income.

Considering the problems and challenges facing the Indonesian agriculture sector, it is highly expected that the agricultural investment will play a role beyond productivity and growth. Basically, the important role that should be played by agricultural investment is to support the agriculture sector in enhancing its capacity to deal with the current problems as well as challenges.

### Private Investment in agriculture in Indonesia

In terms of private investment, the realization of domestic agricultural investment in the period 2005-2007 tended to increase (Table 5). Meanwhile, the foreign agricultural investment increased between 2005 and 2006, but slightly decreased in 2007. Both domestic and foreign agricultural investment then significantly decreased in 2008. This probably resulted as an impact of the global financial crisis which also hit some parts of Indonesian economy. Ministry of Agriculture (2010) pointed out that the 2009 figures reflected a recovery in domestic agricultural investment in Indonesia.

**Table 5. Domestic and Foreign Agricultural Investment, 2005-2009**

	2005	2006	2007	2008	2009*
Domestic (billion Rp)	3,178.9	3,558.6	3,674.0	1,235.0	1,739.3
Foreign (million USD)	224.3	370.7	264.8	151.9	37.9

Source: Ministry of Agriculture (2010)

\*Note: 2009 up to September

Domestic and foreign investment in agricultural sector ranked second after manufacturing sector, meaning that the agricultural sector is attractive for investors. During 1990-1998, however, the actual domestic and foreign investment fluctuated. On average, actual annual domestic investment was higher than foreign investment. In food and estate crop subsector, domestic investment was larger than foreign investment, while in livestock subsector, the reverse situation prevailed. (Hadi, *et. al.*, 2010)

Credit is known as one of the sources for investment. In this respect, Table 6 indicated that the allocation of credit for agriculture sector is relatively low. During the period 1996-2010, credit for agriculture was only around 5 - 6 % of the total credit. Within the period 1996-2010, especially in 1999, the share of agriculture credit reached more than 10 percent but this arose from a significant decrease in the 1999 total credit compared to 1998, from about 519 trillion rupiah (1998) to about 225 trillion rupiah (1999). The significant reduction of total credit happened as the impact of 1997/1998 crisis.

**Table 6. Credit Shares by Sector, Total Credit and Agriculture Credit**

Year	Credit Shares (%)					Total Credit (Trillion IDR)	Agriculture Credit (Trillion IDR)
	Agriculture	Mining	Manufacture	Trade	Others		
1996	5.4	0.5	24.4	21.9	38.4	323.1	17.6

1997	6.3	1.3	26.9	19.8	36.9	414.8	26.0
1998	7.6	1.1	33.1	18.6	33.6	519.2	39.3
1999	10.6	1.6	37.5	19.2	31.2	225.1	23.8
2000	7.2	1.7	39.7	16.4	34.9	269.0	19.5
2001	6.8	2.4	37.9	15.8	37.2	307.6	20.9
2002	6.1	1.7	33.1	18.1	41.1	365.4	22.3
2003	5.5	1.2	28.1	19.3	45.9	437.9	24.3
2004	5.9	1.4	25.9	20.1	46.8	553.5	32.4
2005	5.3	1.1	24.6	19.5	49.5	689.7	36.7
2006	5.7	1.8	23.2	20.6	48.7	787.1	45.0
2007	5.6	2.5	20.3	21.4	50.1	1004.2	55.9
2008	5.2	2.3	20.5	19.8	52.2	1313.9	67.8
2009	5.3	2.9	17.0	20.9	53.9	1446.8	77.4
2010	5.2	3.4	15.5	19.2	56.8	1775.9	91.9

Source: Bank Indonesia (Proceed)

Although agriculture credit was relatively small during the period 2004-2010, the average growth of agriculture credit was higher compared to the manufacturing sectors. Calculations from data in Table 7 show the average growth of agriculture credit during the period was about 21.1 percent, and that of manufacture was only 12.8 percent. Meanwhile, the growth of total credit was 22.3 percent.

**Table 7. Credit Growth by Sector (%)**

Year	Agriculture	Mining	Manufacture	Trade	Total Credit
1997	47.7	211.8	41.6	16.6	28.4
1998	51.2	11.3	53.7	17.1	25.2
1999	-39.4	-37.3	-50.9	-55.1	-56.6
2000	-18.1	27.0	26.7	1.8	19.5
2001	7.2	57.4	9.1	10.0	14.3
2002	6.7	-17.6	3.9	36.1	18.8
2003	9.0	-16.4	1.7	27.7	19.8
2004	33.3	51.0	16.7	31.7	26.4
2005	13.3	2.6	18.2	20.9	24.6
2006	22.6	75.9	7.5	21.0	14.1
2007	24.2	82.0	11.9	32.3	27.6
2008	21.3	20.6	32.1	21.0	30.8
2009	14.2	36.4	-8.7	16.1	10.1
2010	18.7	45.7	11.6	12.7	22.7

Source: Bank Indonesia

With respect to public investment for agriculture, World Bank (2010) argued that the increase (in real terms) in public spending on agriculture after 2000 was largely a reflection of poorly targeted subsidies. Agricultural production did not increase despite increased public spending in real terms. Between 2001 and 2008, national spending on agriculture increased from Rp 11 trillion to Rp 53 trillion, an average growth of 11 percent annually, in real terms. Agriculture's share of total government spending doubled from three percent in 2001 to six percent by 2008, reaching one percent of GDP mostly due to increased subsidies.

World Bank (2010) also indicated that over the past three decades Indonesia's capacity in agricultural R&D has increased significantly, but still remains low by middle-income country standards. By 2007, public spending on R&D was only half that expended on the seed subsidy. After adding in private sector agricultural R&D spending, the intensity with which Indonesia invested in agricultural research (0.27 percent) was roughly the same as Lao PDR's (0.24 percent) and much lower than Malaysia's (1.92

percent) or the Philippines' (0.46 percent). Further public investments in R&D, rural infrastructure and irrigation are necessary complements to private investments in agriculture.

During the period 2005-2011, an average of about 1.5 % of public budget was allocated for agriculture (Table 8). If the public budget for irrigation were included, then the percentage (average) would become about 2.5 %.

**Table 8. Central Government Expenditures, 2005-2011**

COD E	FUNCTION/SUBFUNCTION	2005	2006	2007	2008	2009	2010	2011*)
		Audited	Audited	Audited	Audited	Audited	Audited	Budget
01	GENERAL PUBLIC SERVICES	255,603.2	283,341.1	316,139.3	534,567.2	417,771.9	471,557.6	517,167.0
02	DEFENSE	21,562.2	24,426.1	30,685.9	9,158.5	13,145.7	17,080.5	47,418.7
03	PUBLIC ORDER AND SAFETY	15,617.3	23,743.1	28,315.9	7,019.2	7,753.9	13,835.4	22,066.6
04	ECONOMIC AFFAIRS	23,504.0	38,295.6	42,222.0	50,484.8	58,845.1	52,178.4	101,414.5
04.01	Commercial, cooperation and small medium enterprise	1,572.0	2,055.9	1,765.7	1,597.4	1,783.0	1,642.0	2,279.5
04.02	Labor affairs	441.1	978.1	970.2	1,070.1	1,473.4	1,337.5	1,398.0
04.03	Agriculture, forestry, fishing, and marine	4,959.3	8,345.7	7,570.3	11,241.8	8,716.8	9,004.7	15,920.6
04.04	Irrigation	3,355.0	5,311.1	4,231.8	4,980.0	7,135.5	4,570.2	12,140.9
04.05	Fuel and energy	2,126.6	3,065.1	2,900.7	3,324.6	4,705.2	2,518.1	10,866.5
04.06	Mining	686.0	1,160.0	1,086.7	1,353.1	1,205.5	2,026.6	1,303.7
04.07	Industries and construction	476.3	1,119.4	1,270.0	1,432.8	1,425.7	1,526.3	2,561.5
04.08	Transport	9,087.4	14,287.1	16,647.6	24,730.0	31,218.6	27,516.8	46,979.1
04.09	Telecommunication	262.1	950.1	472.8	546.5	949.5	1,747.3	1.9
04.10	R & D defense	170.0	241.7	-	-	-	-	2,232.3
04.90	Economic affairs n.e.c.	368.2	781.4	5,306.4	208.5	232.0	288.8	5,730.4
05	ENVIRONMENTAL PROTECTION	1,333.9	2,664.5	4,952.6	5,315.1	10,703.0	6,549.6	11,069.6
06	HOUSING AND COMMUNITIES	4,216.5	5,457.2	9,134.6	12,448.7	14,648.5	20,053.2	23,425.3
07	AMMENITIES							
07	HEALTH	5,836.9	12,189.7	16,004.5	14,038.9	15,743.1	18,793.0	13,649.4
08	TOURISM AND CULTURE	588.6	905.4	1,851.2	1,293.7	1,406.2	1,408.7	2,901.4
09	RELIGION	1,312.3	1,411.2	1,884.2	745.7	773.5	878.8	1,397.3
10	EDUCATION	29,307.9	45,303.9	50,843.4	55,298.0	84,919.5	90,818.3	91,483.0
11	SOCIAL PROTECTION	2,103.8	2,303.3	2,650.4	2,986.4	3,102.3	3,341.6	4,585.5
<b>TOTAL</b>		<b>361,155.2</b>	<b>440,031.2</b>	<b>504,623.5</b>	<b>693,356.0</b>	<b>628,812.4</b>	<b>697,406.4</b>	<b>836,578.2</b>

Source: Ministry of Finance

## 5. INVESTMENT BY THE CORPORATE SECTOR IN AGRO-INDUSTRIES

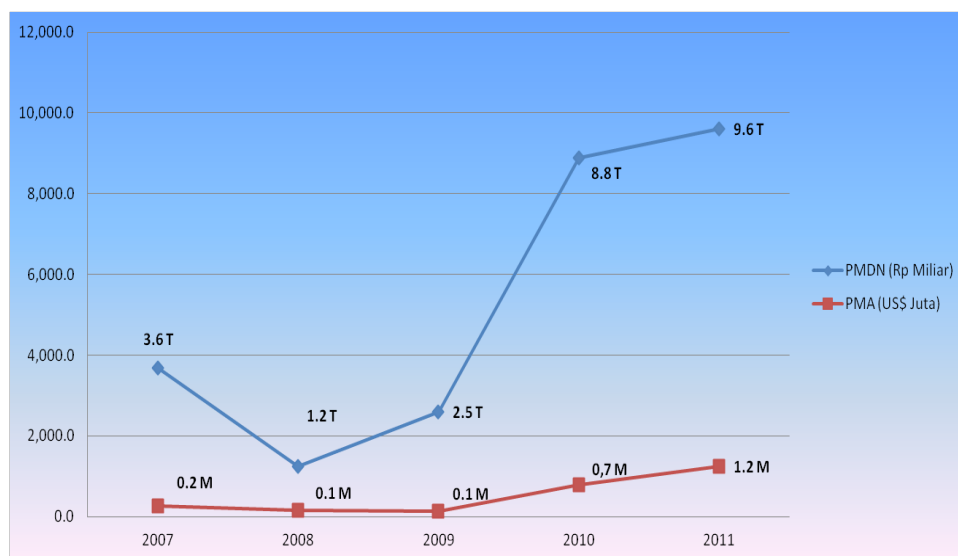
In the face of the national challenge and imperative to achieve food security and resilience in strategic commodities, addressing legitimate expectations of farmers and improving their perspective and outlook on the importance and promise of agricultural pursuits are major elements to address in the efforts to increase farm investment and engender capital formation. Public goods like agriculture training, extension and education, rural institution and support services are crucial complements in revising the outlook for farming, particularly the youth's and in promoting the adoption and application of modern technologies. Agricultural extension or supervision can improve farming skills and provision of rural infrastructure and institutional support can enhance the availability of production inputs, equipment or services and flexibility of access with respect to credit sources in addition to the social capital and networking available to farmers and rural dwellers to support farm operations and capital formation.

Technical factors such as access to land, size of landholding, agro-ecosystem, and socio-economic characteristics influenced investment decisions by farm households. In smallholder food and agriculture production, investments appeared to be constrained and determined by the production possibilities associated with small fragmenting operational holdings, mono-culture farming, unfavorable land characteristics or agro-ecosystem, Also, limited management skills, behavioral outlook or the inherently small demand for farm capital perhaps leave little room for expanding farm investments in a situation of capital-scarcity and labor-abundance, where operational holdings are small and fragmenting.

Above situation differs radically from that in perennial estate crops or commercial plantation agriculture, where by nature investments are an inherent part of farm operations<sup>3</sup>. Here, the large agribusiness and agro-processing firms and conglomerates are the main active and dominant players with respect to credit and equity financing production, marketing and trade operations as well in moving investments and capital formation. By virtue of the 20% legal requirement to set aside operational holding for participation by small producers, these business entities also becomes instrumental to farm investments and capital formation among stakeholders. The potentials and needs for capital investments are likewise significantly large with respect to the emergence of integrated food and agriculture value chains and hypermarkets and their associated processing and merchandising activities.

The trends of investment in Indonesian agriculture is given in Figure 1.

**Figure 1:  
Trend of agricultural investment**

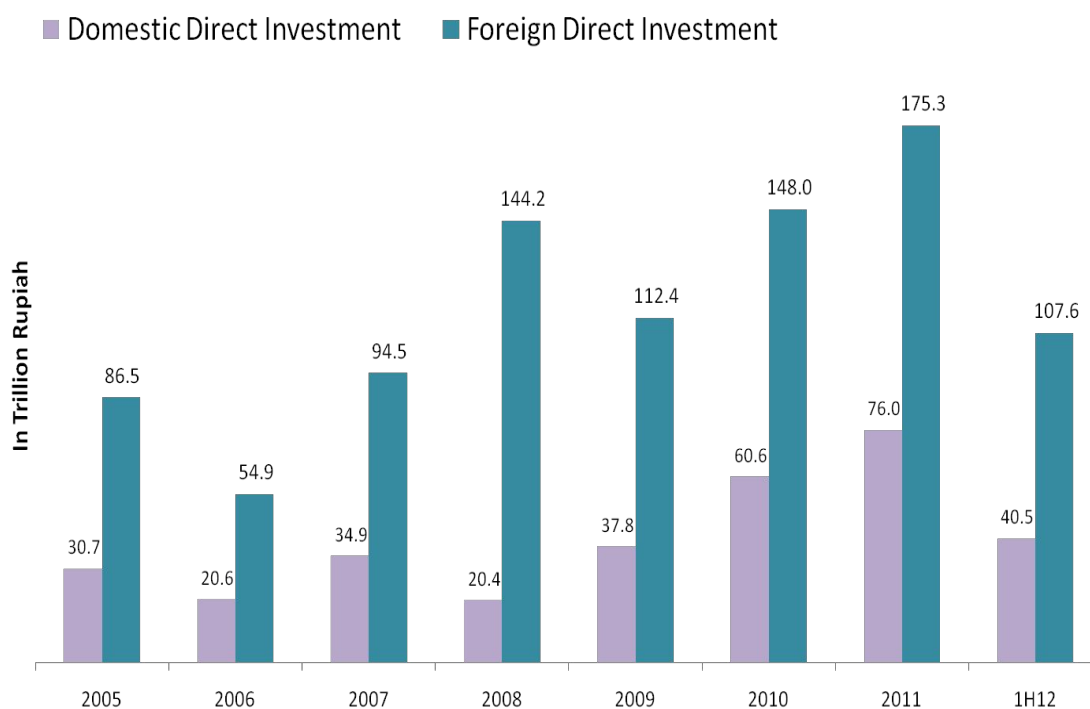


### **Breakdown of the investment by Domestic and Foreign Direct Investment (FDI)**

Breakdown of the investment by Domestic and Foreign Direct Investment (FDI) is given in Figure 2.

**Figure 2**

<sup>3</sup> Such aspects, however, are beyond the scope of this present study and may be covered by another subsequent investigation.



As can be seen from the above figures both investment tends to increase. The main points can be summarized as follows:

- Overall increase in total investment in agriculture since 2000
- Relatively low investment levels compared to the economic importance of the sector
- Low FDI inflows compared to other sectors since 2000
- But sharp increase in large scale private investment in palm oil and biofuel since 2010

## 6. THE IMPORTANT PRIVATE COMPANIES IN AGRICULTURE REGISTERED IN THE STOCK EXCHANGE

Agricultural Company listed in IDX-Profile

Company	Commodity and Stages	Land area and Location	Investment Planning
AAI (2011)	(AstraPalm Lestari)(Plantation, Processing)	OilPlanted area 266,706 ha: nucleus (206,579 ha); plasma (60,127 ha) in (Sumatera, Kalimantan, and Sulawesi)	To expand its plantation. Seeking new land bank Invest more in processing
BW (2011)	PlantationPalm (Plantation, Processing)	OilPlanted area 60,064 ha: nucleus (53,521 ha); plasma (3,863 ha) Land bank: 41,148 ha in (Kalimantan)	To expand plantation 4,000 ha (2012) 1 more factory or PKS (2012)



GZCO (Gozco Palm Plantation (2011))	(Plantation, Processing)	Oil Area Planted (Sumatera Kalimantan)	119,937 ha, 36,483 ha	2012: Finishing oil palm factory construction and
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Company	Commodity and Stages	Land area and Location	Investment Planning
JAWA (J.A. Wattie) (2011)	Rubber and Palm Oil (Plantation, Processing)	Planted area 31,734 ha: Nucleus (27,734 ha) and Plasma (4,000 ha)	2012: To expand its plantation: Plans to plant 4,500 ha (rubber) and 3,500 ha (Palm Oil) ; Construct an oil palm processing factory, a crumb rubber factory, and rubber sheet Factories
LSIP (PP London Sumatera Indonesia (2011))	Palm Oil (Seed, Processing); Rubber; Cacao, Tea	Planted area (nucleus): Palm Oil (80,732 ha); Rubber (17,700 ha); Cacao and Tea (3,713 ha). Plasma (35,995 ha) palm.	In 2012 and beyond, the development of existing land bank into productive plantation area is priority, with focus on oil palm.

No	Company	Commodity and Stages	Land area and Location	Investment Planning
6	SGRO (Sampoerna Agro) (2011)	Palm Oil (Seed, Processing); Sago; Rubber	Palm Oil Planted area: 108,543 ha (nucleus); 61,469 ha; 43,509 ha; 3,565 ha)	Good prospect on demand and price in 2012 Developing sago starch factory partnership (2012) Land expansion in the short run
7	SMART (Sinar Mas Agro Resources and Tech) (2011)	Palm (Plantation, Processing)	Oil Palm Oil planted area: 138,959 ha, (nucleus 108,612 ha), (plasma 30,347)	To extent production capacity Developing factories, Focus on high-value commodities
8	TBLA (Tunas Baru Lampung) (2011)	Palm (Plantation, Processing)	Oil Planted Area: 57,320 ha	Increasing the planted area towards 110.000 Ha by 2015. Vertically integrated operations.

No	Company	Commodity and Stages	Investment Planning
9	CPIN (Charoen Pokphand) (2011)	Poultry Feeds, Processed Food	DOC, Increasing production capacity, by building a new poultry farms. Building a new DOC farming farms. Diversifying into the downstream business.
10	CPRO (Central Proteinaprima) (2011)	Business segments include aqua feed and fry, shrimp products and probiotics	Expand Feed Distribution Network. Expedite food market penetration.

11	BISI (BISI International) (2011)	Production and sale of high-quality seeds for corn, paddy, and horticulture; and agrochemicals (fertilizer and pesticides)	Product development and increase hybridsales performance
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## 7. PERCEPTION OF THE COMPANIES ABOUT INVESTMENT IN AGRICULTURE

### 7.1 Factors favouring investment in Indonesian agriculture

The factors which are positive for investing in agriculture in Indonesia:

- Political stability
- Sound economic fundamentals
- Young, well-trained and relatively cheap labour force
- Unexploited land suitable for agricultural production
- Increasing domestic and global demand for food and energy

### 7.2 Factors Constraining investment in Indonesian agriculture

- Complex and insecure land rights
- Insufficient and poor quality infrastructure - damaged irrigation network, high transport and logistics costs, and lack of reliable electricity
- Limited access to credit for micro, small and medium enterprises
- Export taxes on crude palm oil and cocoa beans

### 7.3 What the Companies would like the Government to do to increase their investment in agriculture

- Accelerate the registration of land rights
- Clarify the land tenure system
- Recognize and protect customary land rights
- Simplify business licensing procedure
- Coordinate and strengthen periodic evaluations of the Negative Investment List
- Assess short-term and long-term cost and benefits of export taxes on palm oil and cocoa beans and accordingly reduce the tax burden.

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